XR-7050

SERVICE MANUAL

US Model
Canadian Model
AEP Model

SPECIFICATIONS

Power amplifier section

Outputs — Speaker outputs (sure seal connectors)
Preamp outputs (phono jacks)
Speaker impedance — 3.2 – 8 ohms
Maximum power output
25 W + 25 W (at 4 ohms)*
*Measured at 14.4V

Cassette player section

Tape track — 4-track 2-channel stereo
Frequency response — 40 – 16,000Hz
Signal-to-noise ratio — With type II, 1V cassette
58dB (A-weighted)
(Dolby NR off)
With type I cassette
55dB (A-weighted)
(Dolby NR off)
Dolby B NR effect — 8dB
Wow and flutter — 0.15% (WRMS)

Tuner section

System — Superheterodyne tuner
Computerized quartz locked synthesizer system
Antenna terminal — FM/AM external antenna connector
FM/AM power antenna relay control lead

FM tuner section

Tuning range — 87.9–107.9MHz (US, Canadian)
87.5–108.0MHz (AEP)
Intermediate frequency
10.7MHz

Model Name Using Similar Mechanism	XR-510R, XR-511R
Tape Transport Mechanism	MG-48-83

Usable sensitivity — 12.5dB (75 ohms)
Sensitivity at 50dB quieting
17.5dB (75 ohms)
Selectivity — 70dB at 400kHz
Signal-to-noise ratio — 65dB (stereo), 68dB (mono)
Harmonic distortion at 1kHz
0.9% (stereo), 0.5% (mono)
Separation — 35dB at 1kHz
Frequency response — 30–15,000Hz
Capture ratio — 2.0dB

AM tuner section

Tuning range — 530–1,610kHz (US, Canadian)
531–1,602kHz (AEP)
Intermediate frequency
450kHz (US, Canadian)
459kHz (AEP)
Sensitivity — 34μV

– Continued on page 2 –

Dolby noise reduction manufactured under license from Dolby Laboratories Licensing Corporation.
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FM/AM CASSETTE CAR STELEO

SONY®

General

Tone controls	Bass ±8dB at 100Hz Treble ±8dB at 10kHz
Loudness	+6dB at 100Hz +6dB at 10kHz
Output lead	Power antenna relay control lead
Power requirements	12V DC car battery (negative ground)
Dimensions	Approx. 178 x 50 x 160mm (w/h/d) ($7^1/_8$ x 2 x $6^3/_8$ inches) not incl. projecting parts and controls
Mounting dimensions	Approx. 182 x 53 x 145mm (w/h/d) ($7^1/_4$ x $2^1/_8$ x $5^3/_4$ inches) not incl. projecting parts and controls
Weight	Approx. 1.3kg (2 lb 14 oz)
Accessories supplied	Mounting hardware (1 set) Fuses (1 set)

FEATURES

Tuner section

- Memory preset tuning function allows you to store 6 stations for each band in memory.
- **Precise tuning is possible** with the digital synthesizer system.

Cassette deck section

- **Auto-reverse function** to listen to both sides of a cassette repeatedly.
- **The Dolby B NR system** reduces tape hiss noise during playback.
- **METAL button** for high-performance metal tapes.
- **Automatic Music Sensor (AMS)** to locate the beginning of a selection during playback.

General

- **Direct function system** allows you to listen to the program source selected last directly.
- You can control the balance of the front speakers and the rear speakers in a 4-speaker system with an additional amplifier as well as with the built-in amplifier (Multi-fader system).
- **Auto loudness circuit** to reinforce the bass and treble automatically when listening at a low volume.
- **Maximum power output of 25 W + 25 W.**

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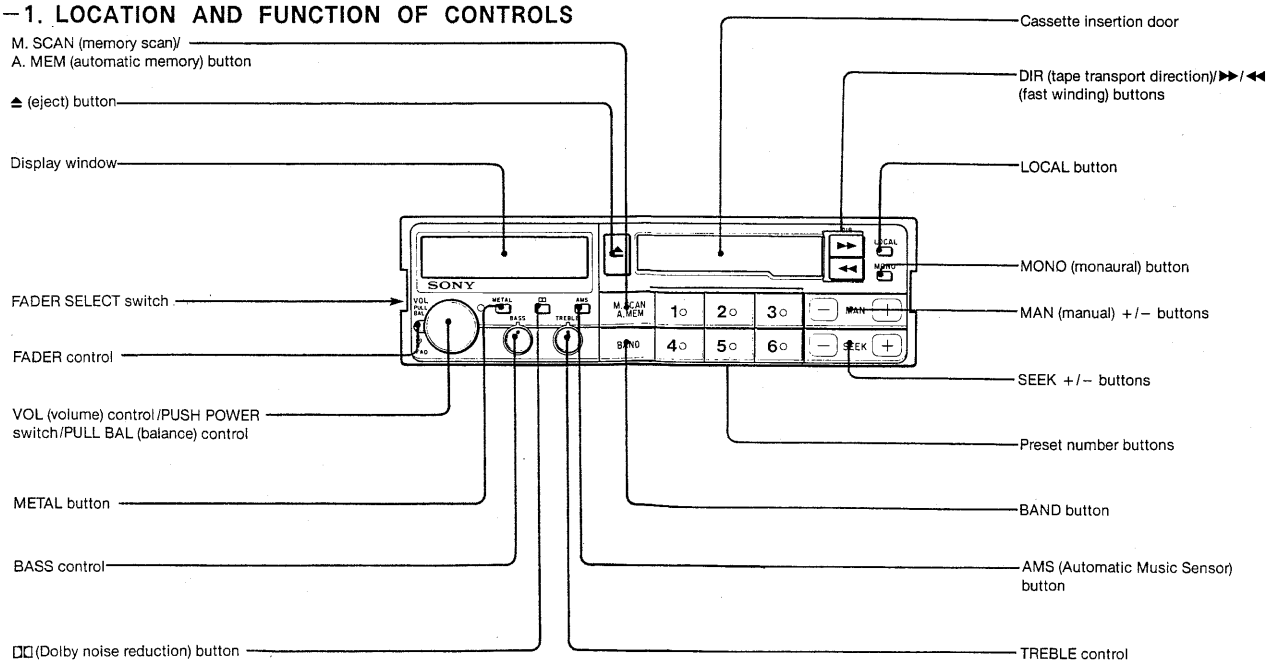
SECTION 1
GENERAL

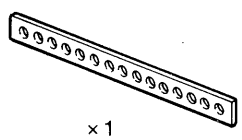
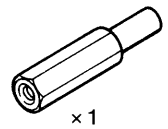
1-1. LOCATION AND FUNCTION OF CONTROLS



1 – 2. CONNECTIONS

Supplied Mounting Hardware
Matériel de montage fourni

The numbers in the list are keyed to those in the instructions.
Les numéros de la liste correspondent à ceux mentionnés dans les instructions.

① 3-310-655-01  × 1	② 3-223-210-01  × 1	③ 3-323-208-01 × 1
④ 7-682-179-01 × 1	⑤ 7-684-025-04 × 1	⑥ 7-682-548-04 × 1

Precautions

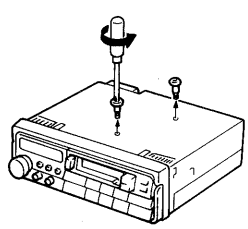
- Choose the mounting location carefully so that the unit will not interfere with the normal driving functions of the driver.
- Avoid installing the unit where it should be subject to high temperatures, such as from direct sunlight or from hot air from the heater, or where it would be subject to dust, dirt or excessive vibration.
- Use only the supplied mounting hardware for a safe and secure installation.

Précautions

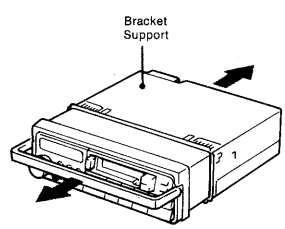
- Choisir soigneusement l'emplacement de sorte que l'appareil ne gêne pas la conduite.
- Eviter d'installer l'appareil là où il serait soumis à de hautes températures, telles que celles du rayonnement solaire direct ou de l'air chaud du chauffage, là où il serait exposé à la saleté, à la poussière excessive ou à de violentes vibrations.
- Pour une installation sûre, s'assurer de n'utiliser que le matériel de montage fourni.

To Install the Unit in the Dashboard
Encastrement de l'appareil dans le tableau de bord

1 Remove the lock screws.
Enlever les vis de verrouillage.

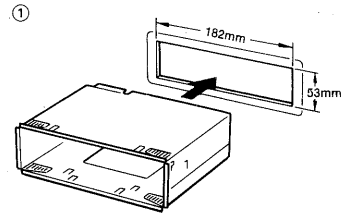


2 Remove the bracket.
Enlever le support.

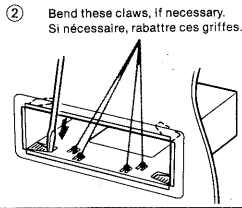


3 Install the bracket in the dashboard.
Fixer le support dans le tableau de bord.

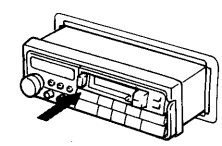
①



② Bend these claws, if necessary.
Si nécessaire, rabattre ces griffes.



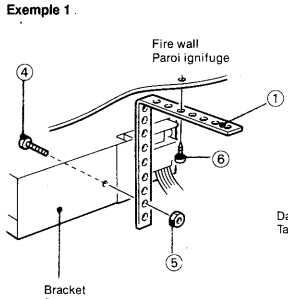
4 Secure the unit.
Fixer l'appareil.



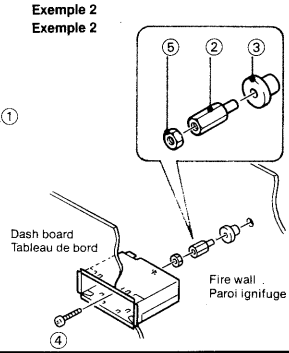
Push in the unit until it is locked firmly.
Pousser l'appareil jusqu'à encliquetage.

To Support the Unit
Fixation de l'appareil

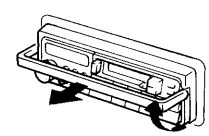
Example 1
Exemple 1



Exemple 2
Exemple 2



To Remove the Unit
Dépose de l'appareil



This prevents your car stereo set from being stolen.

Ceci fait office d'anti-vol.

Caution

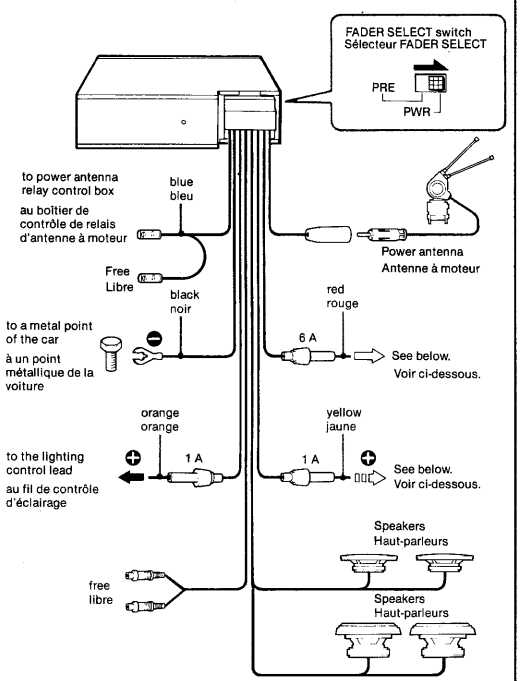
- This unit is designed for negative ground 12 V DC operation only.
- Before making connections, disconnect the ground terminal of the car battery to avoid short circuits.
- Connect the **red** power input lead only after all other leads are connected. And be sure to connect it to the positive 12 V power terminal. It will be energized when the ignition key is set to the accessory position.
- **Run all ground wires (coloured in black) to a common ground point.**

Attention

- Cet appareil est conçu pour fonctionner sur courant continu de 12 V avec masse négative.
- Avant de procéder aux connexions, débrancher la borne de masse de la batterie de voiture pour éviter tout court-circuit.
- Raccorder le cordon d'alimentation **rouge** en dernier lieu et s'assurer de le raccorder à la borne d'alimentation positive de 12 V. Celle-ci est énergétisée lorsque la clé de contact est à la position accessoire.
- **Tirer tous les fils de masse (noirs) en un même point.**

System Connection
Connexion du système

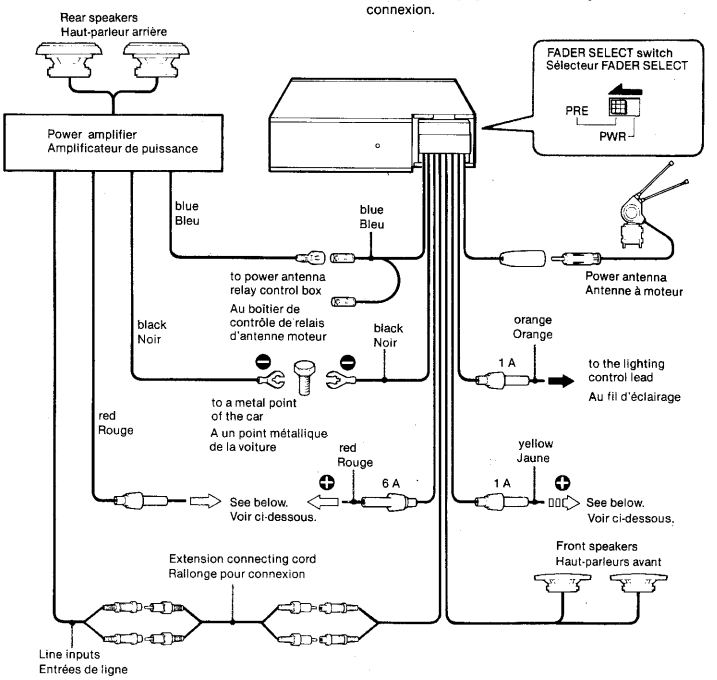
2- or 4-speaker system connection with the built-in amplifier
Connexion du système à 2 ou 4 haut-parleurs avec l'amplificateur incorporé



4-speaker system connection with an additional power amplifier
Connexion avec un système à 4 haut-parleurs avec un amplificateur supplémentaire

Connect the front speakers to this unit and the rear speakers to the additional power amplifier. You can enjoy powerful 4-speaker system. The FADER control activates in this connection, too.

Connecter les haut-parleurs avant à cet appareil et les haut-parleurs arrière à l'amplificateur supplémentaire. Il est ainsi possible d'avoir un système à 4 haut-parleurs. Le réglage FADER active également cette connexion.

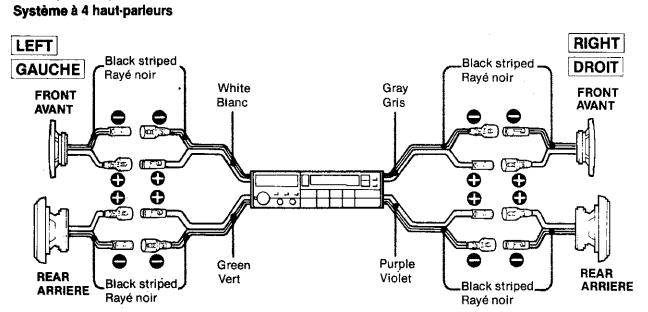


: to the + 12 V power terminal which is energized in the accessory position of the ignition key
A la borne + de 12 V qui est énergétisée lorsque la clé de contact se trouve sur la position accessoire.

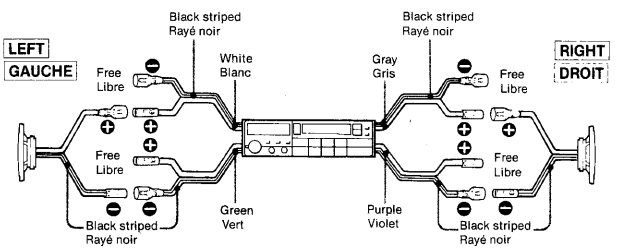
: to the + 12 V power terminal which is energized at all times
A la borne + de 12 V qui est énergétisée en permanence.

Speaker Connection
Connexion des Haut-Parleurs

For 4-speaker system
Système à 4 haut-parleurs



For 2-speaker system
Système à 2 haut-parleurs



Notes on speaker connection
- Use speakers with an impedance of 3.2 to 8 ohms, and with adequate power handling capacities. Otherwise, the speakers may be damaged.
- Do not connect the terminals of the speaker system to the car chassis, and do not connect the terminals of the right speaker with those of the left speaker.
- Do not attempt to connect the speakers in parallel.

Remarques sur le raccordement des haut-parleurs
- Utiliser des haut-parleurs d'une impédance de 3,2 à 8 ohms et d'une puissance admissible adéquate, sinon les haut-parleurs risquent d'être endommagés.
- Ne pas raccorder les bornes des haut-parleurs au châssis de la voiture et ne pas raccorder le haut-parleur droit au haut-parleur gauche.
- Ne pas raccorder les haut-parleurs en parallèle.

SECTION 2
MICROCOMPUTER SPECIFICATION
(μPD1708AG-765)

[IC001 (μPD1708AG-765-00)]

2-1. Pin Function

Pin No.	Description
1--4	LCD's segment signal output terminal.
34, 52	LCD's segment signal output terminal
5, 6	LCD's common signal output terminal.
7, 33	Power supply terminal (internally connected).
8	FM local oscillation signal input terminal.
9	AM local oscillation signal input terminal.
10	GND
11	Unused.
12	PLL error output terminal. When the local oscillation frequency is higher than a reference frequency, a high signal is output. When it is lower than a reference frequency, a low signal is output. When both frequencies do not coincide, the floating status is entered.
13	Goes high to activate the PLL block. Goes low to stop it.
14	Unused.
15, 16	Clock oscillation terminal.
17	MUTE signal output terminal.
18	STEREO/MONAURAL select output terminal. Goes high when STEREO is selected, and goes low when MONAURAL is selected.
19	Band select signal output terminal. Goes high during FM, and goes low during AM.
	Unused.
21--24	Key matrix signal input terminal.
25--31	Key scanning signal output terminal.
32	DX/LOCAL select signal output terminal. Goes low during DX, and goes high during LOCAL.

SECTION 3
MECHANICAL ADJUSTMENTS

3-1. PRECAUTION

1. Clean the following parts with a denatured-alcohol-moistened swab :
   playback head　　pinch roller
   capstan　　rubber belts
   idlers
2. Demagnetize the playback head with a head demagnetizer.
3. Do not use a magnetized screwdriver for the adjustments.
4. After the adjustments, apply suitable locking compound to the parts adjusted.

Toreque Measuremnt

	Torque meter	Meter reading
FWD	CQ-102B	35-70g · cm (0.48-0.97 oz · inch)

SECTION 4
ELECTRICAL ADJUSTMENTS

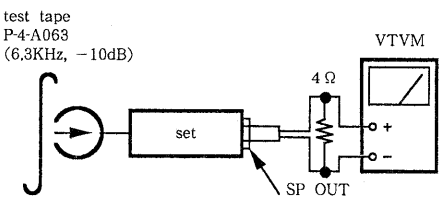
4-1. TAPE SECTION

1. The adjustments should be performed with the rated power supply voltage unless otherwise noted.
2. The adjustments should be performed in the order given in this service manual. The adjustments should be performed for both L-CH and R-CH.

4-1-1. Playback Head Azimuth Adjustment

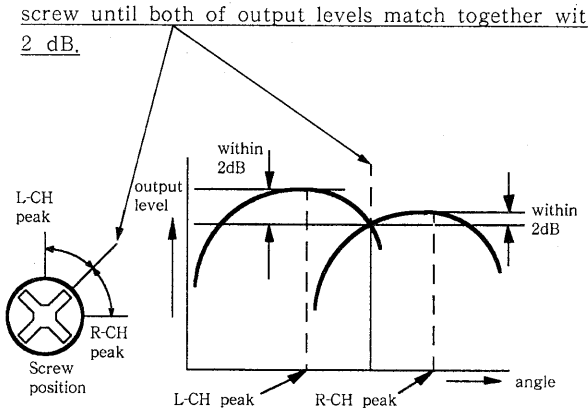
Procedure :

1. Mode : forward playback

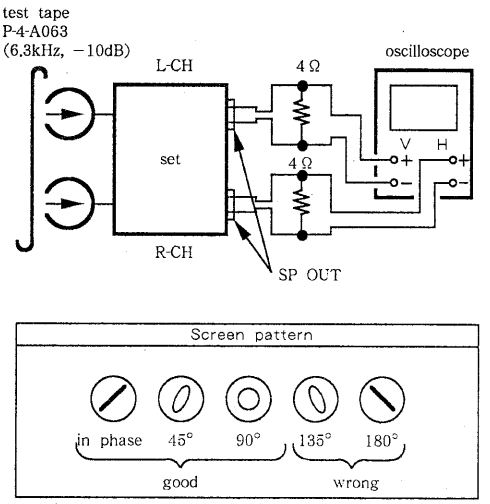


Adjust for forward and reverse direction.

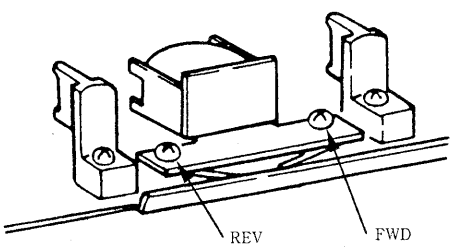
2. Turn the adjustment screw for the maximum output levels. If these levels do not match, turn the adjustment screw until both of output levels match together within 2 dB.



3. Phase Check
   Confirm that phase difference between L-channel and R-channel is within 90°



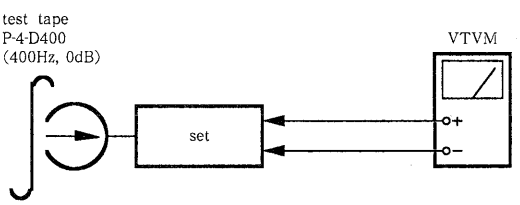
4. Repeat the above adjustment for reverse playback mode.
5. After the adjustment, lock the screws with locking compound.



4－1－2. Dolby Level Adjustment

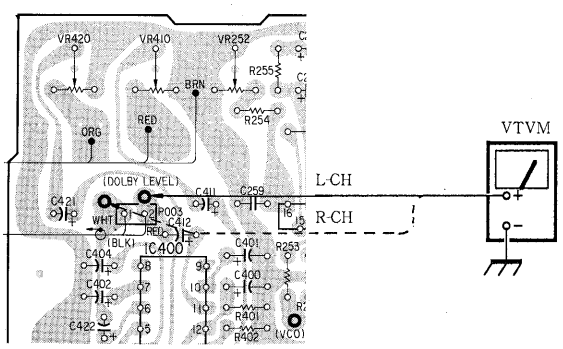
Procedure :

1. Mode : forward playback



2. Adjust VR410 (L-CH) and VR420 (R-CH) so that the VTVM reads 548mV (−3dB).
3. Put the set into the REV mode and check the VTVM reading in 461mV (−4.5dB) to 651mV (−1.5dB).

main board (conductor side)

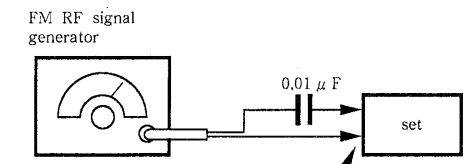


4－2. RADIO SECTION

4－2－1. FM SECTION

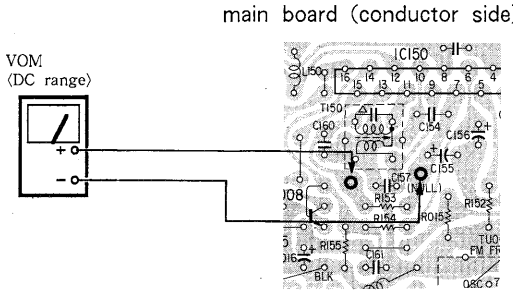
FM Discriminator NULL Adjustment.

Setting :



( ) : AEP model

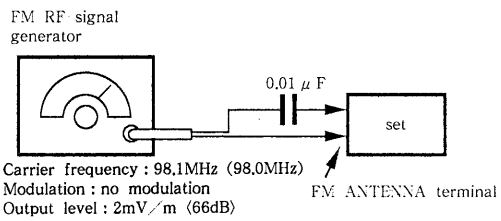
main board (conductor side)



1. Push the TUNING 〈+,−〉 button for 98.1MHz (98.0MHz).
2. Adjust T150 for 0V reading on the VOM.

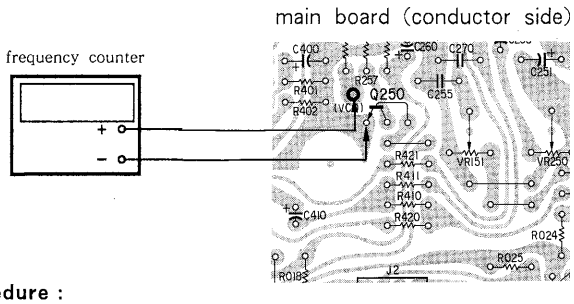
VCO Adjustment

Setting :



( ) : AEP model

main board (conductor side)

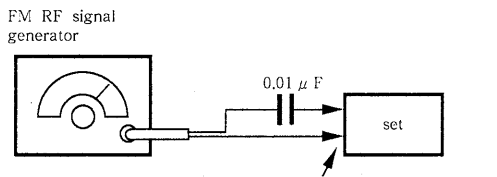


Procedure :

1. Push the TUNING 〈+,−〉 button for 98.1MHz (98.0MHz).
2. Adjust VR252 for 19kHz ±30Hz reading on the frequency counter.
   ( ) : AEP model

FM Stereo Separation Adjustment

Setting :



Procedure :

1. Fully turn VR151 counterclock wise.

FM stereo signal generator output channel	VTVM connection	VTVM reading (dB)
L-CH	L-CH	Ⓐ
R-CH	L-CH	Ⓑ Adjustment VR250 for minimum reading.
R-CH	R-CH	Ⓒ
L-CH	R-CH	Ⓓ Adjustment VR250 for minimum reading.

L-CH Stereo separation : Ⓐ − Ⓑ
R-CH Stereo separation : Ⓒ − Ⓓ
The separations of both channels should be equal.

2. Adjust so that separation is maximized.
3. Set the output level of a signal generator to 199.5 μ V／m 〈46dB〉 and adjust VR151 so that separation is 10dB.

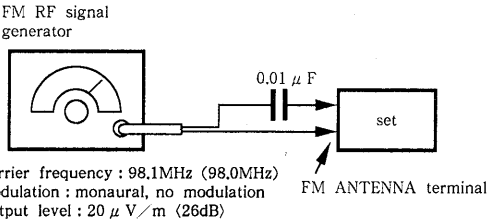
REVISED

FM Auto-scan Stop Level Adjustment

Note :Be sure to perform this adjustment before "AM Auto-scan Stop Level Adjustment"

Setting

BAND : FM MONO
Frequency : 98.1MHz (98.0MHz)

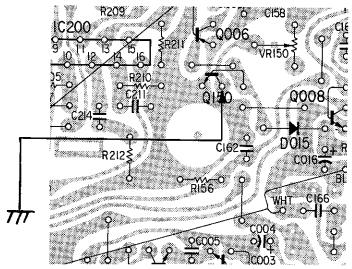

FM RF signal generator
0.01 μ F
set
Carrier frequency : 98.1MHz (98.0MHz)
Modulation : monaural, no modulation
Output level : 20 μ V/m (26dB)
FM ANTENNA terminal

( ) : AEP model

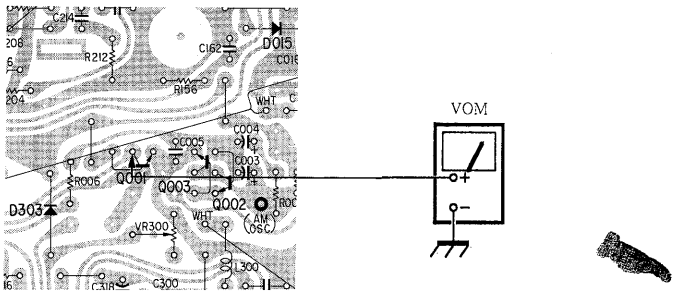
Procedure :

1. Using a lead wire, connect Q150 collector and GND.

main board (conductor side)



2. Adjust and set VR150 at the point where voltage reading suddenly changes from low to high.
(reference value : around 4.5V on collector of Q001)
main board (conductor side)

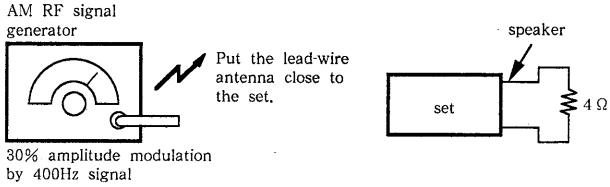


3. After adjustment is completed remove the lead wire.

4-2-2. AM SECTION

Setting :

BAND selector switch : AM

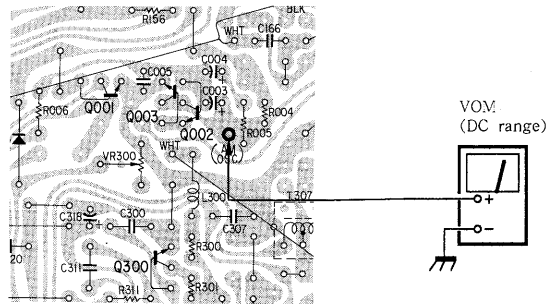


● Repeat the procedures in each adjustment several times, and the OSC volyage and tracking adjustments should be finally done by the trimmer capacitors.

AM OSC Voltage Adjustment

Setting :

main board (conductor side)



Procedure :

1. Set BAND selector switch to AM.
2. Adjust TP307 so that the VOM reading satisfies the specitication.

Specification

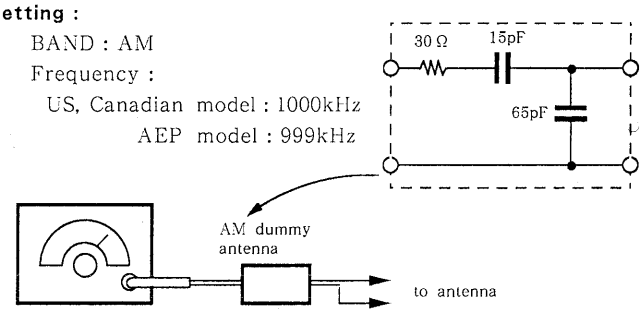
f min	530kHz (531kHz) 1.1-1.2V
f max	1,610kHz (1,602kHz) 7.0-8.0V

( ) : AEP model

AM Auto-scan Stop Level Adjustment

Setting :

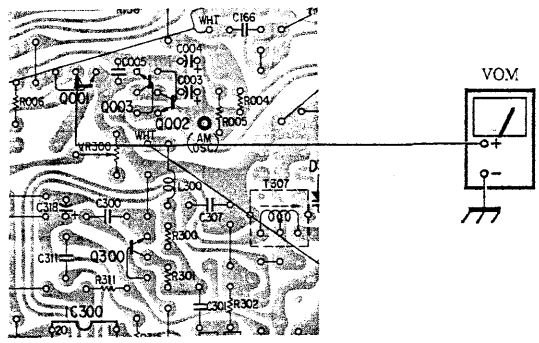
BAND : AM
Frequency :
US, Canadian model : 1000kHz
AEP model : 999kHz



Procedure :

1. Adjust and set VR300 at the point where voltage reading suddenly changes from low to high.
(reference value : around 4.5V on collector of Q001)

main board (conductor side)



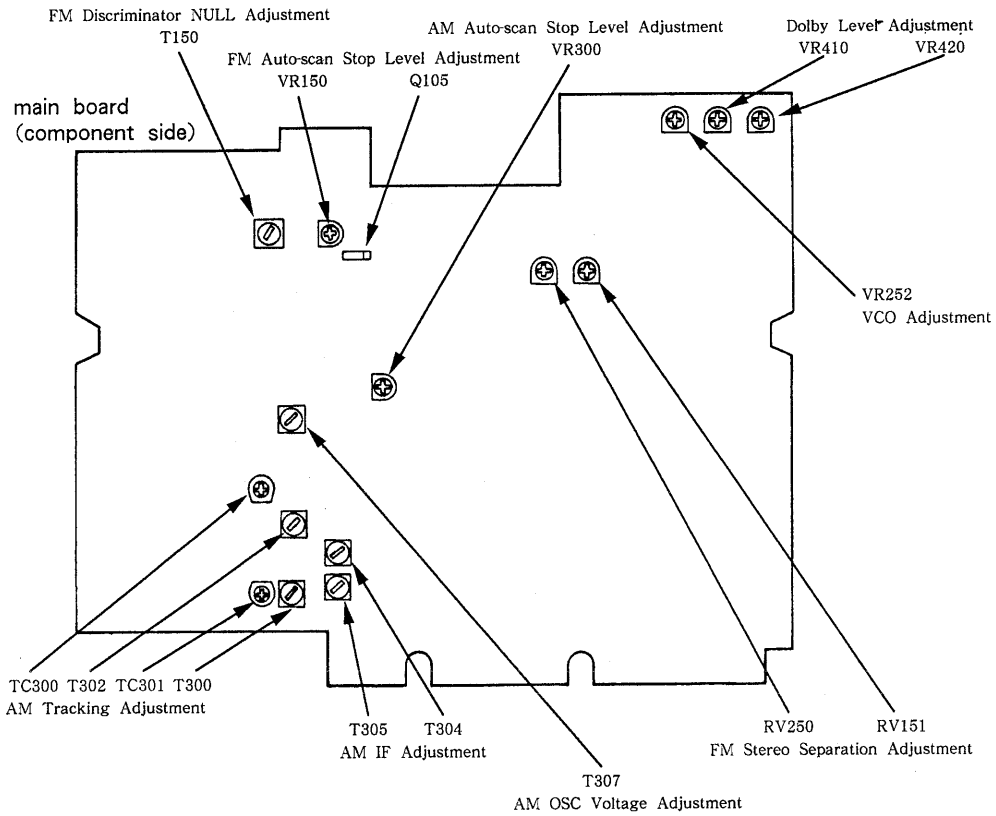
AM IF ADJUSTMENT	
Adjust for a maximum reading on VOM	
T304, T305	450kHz (459kHz)

( ) : AEP model

AM TRACKING ADJUSTMENT	
Adjust for a maximum reading on VOM	
T300, T302	600kHz (603kHz)
TC300, TC301	1,400kHz (1,404kHz)

( ) : AEP model

ADJUSTMENT PARTS LOCATION DIAGRAM



MEMO

SECTION 5
DIAGRAMS

5-1. SEMICONDUCTORS LEAD LAYOUT

CXA1101P	**μPC4558G2**	**2SD1802-T**	**DSA3A4**
			cathode / anode
LA1140 **LA2110** **LA3370**	**μPD1708AG-765-00**	**2SK427**	**GL-1HY102**
LA1135	**2SA874-Q** **2SA937-Q** **2SC2021-Q** **2SC3900** **DTA124F**	**DTA114YK** **DTC114YK**	**SVC321SP-A2**
			anode / cathode
M51524L	**2SC2001-K2**	**10E-2** **1SS99** **HZ6B2L** **RD5.1EB2** **RD10EB2**	
		cathode / anode	
TA8210H	**2SD862-F**	**1SS133**	
	letter side	cathode / anode	

Note:

- Color code or sleeving over the end of the jacket.

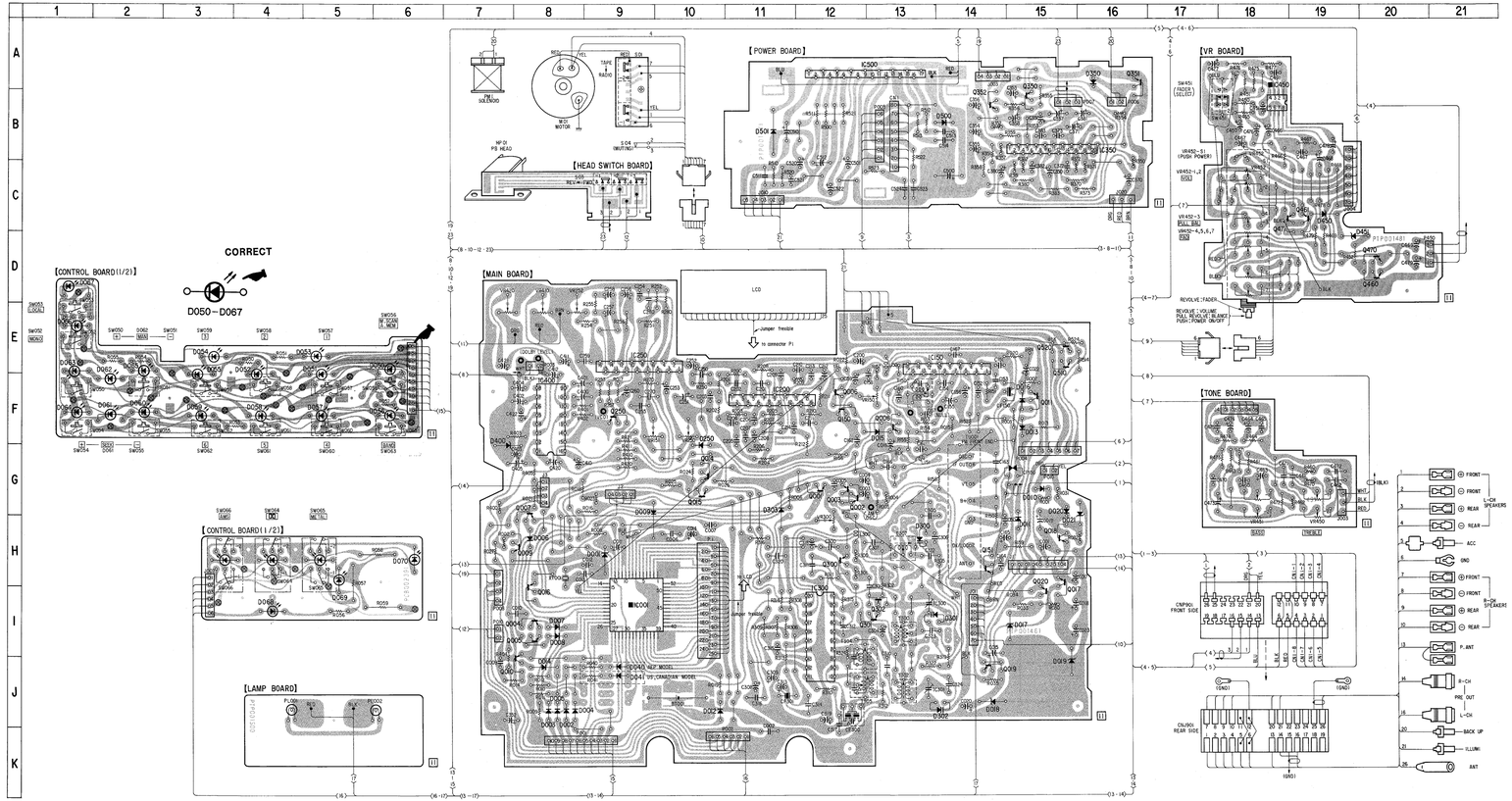
- ○——: parts extracted from the component side.
- ●——: parts extracted from the conductor side.
- ■ : parts mounted on the conductor side.
- ⊡ indicates side identified with part number.
- ⊗ : Through hole.
- ▨ : Pattern on the side which is seen.
- ▨ : Pattern of the rear side.

●SEMICONDUCTOR LOCATION

Ref.No.	Location	Ref.No.	Location
IC001	I-9	D010	G-15
IC150	E-14	D011	H-15
IC200	F-11	D012	J-10
IC250	E-9	D013	F-15
IC300	I-12	D014	J-8
IC350	B-15	D015	F-15
IC400	F-8	D016	F-15
IC450	B-18	D017	I-15
IC500	A-13	D018	J-14
		D019	J-15
Q001	G-12	D020	G-15
Q002	G-12	D021	G-16
Q003	G-12	D040	J-9
Q004	I-8	D041	J-9
Q005	I-8	D050	E-6
Q006	F-12	D051	F-5
Q007	G-8	D052	F-4
Q008	F-13	D053	E-5
Q009	H-8	D054	E-3
Q010	J-8	D055	F-3
Q011	F-15	D056	F-6
Q014	G-10	D057	F-5
Q015	G-10	D058	F-4
Q016	I-8	D059	F-3
Q017	H-15	D060	F-2
Q018	H-15	D061	F-2
Q019	J-14	D062	F-2
Q020	I-15	D063	E-1
Q150	F-12	D064	F-1
Q151	H-14	D065	E-2
Q250	F-9	D066	E-1
Q300	H-12	D067	D-1
Q301	I-12	D068	I-4
Q302	I-13	D069	H-5
Q350	B-15	D070	H-6
Q351	A-16	D250	F-10
Q352	B-14	D300	H-13
Q460	D-20	D301	I-13
Q461	C-19	D302	J-14
Q470	D-20	D303	G-11
Q471	C-19	D350	A-16
Q510	E-15	D400	F-7
Q520	E-15	D450	C-19
		D451	D-19
D001	H-9	D500	B-14
D002	J-8	D501	B-11
D003	J-8		
D004	J-8		
DDD5	J-8		
D006	H-8		
D007	I-8		
D008	I-8		
D009	G-9		

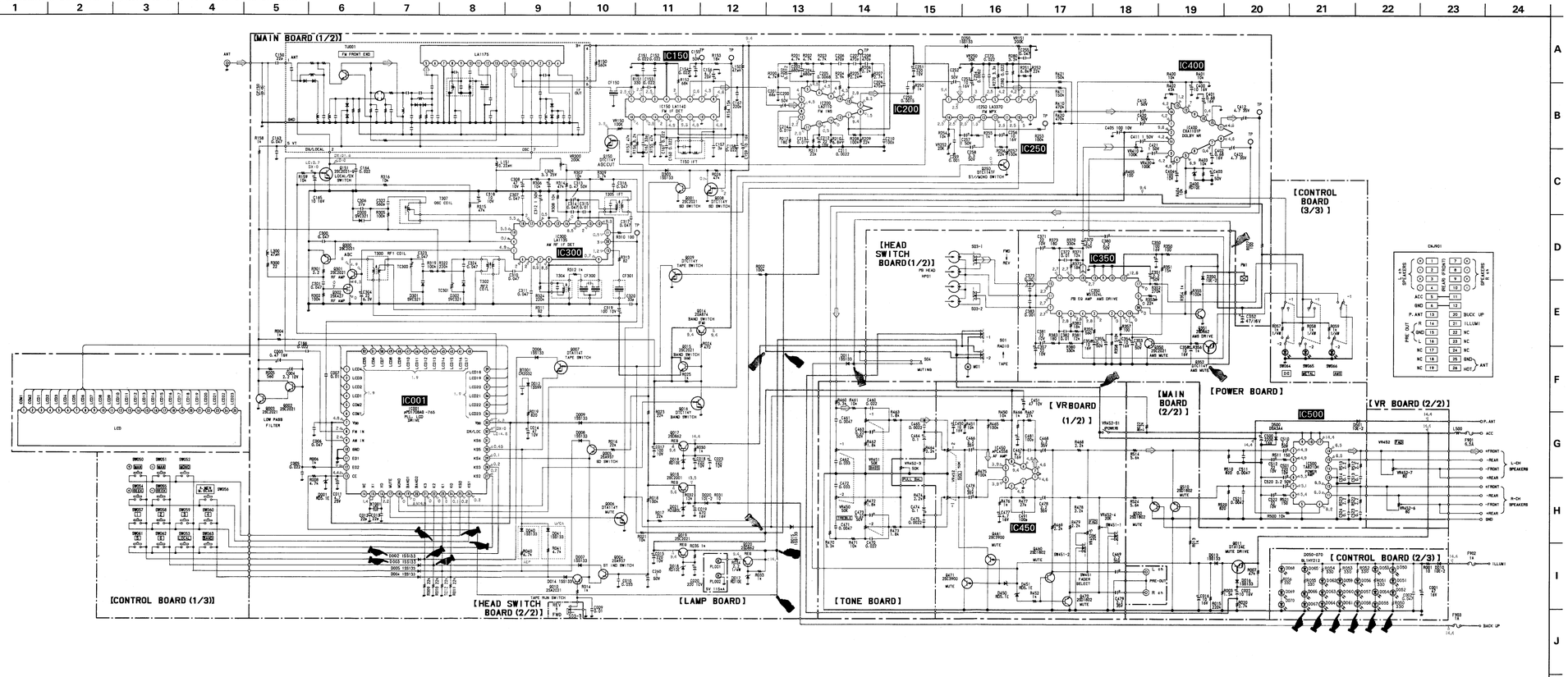
REVISED

5-2. PRINTED WIRING BOARDS



XR-7050 XR-7050

5-3. SCHEMATIC DIAGRAM ●Refer to page 19 for IC Block Diagrams.



Note:

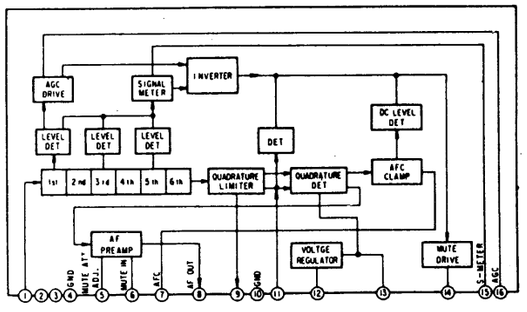
- All capacitors are in μF unless otherwise noted. pF: μμF 50WV or less are not indicated except for electrolytics and tantaliums.
- All resistors are in Ω and 1/4W or less unless otherwise specified.
- % : indicates tolerance.
- **Switch**

Ref. No.	Switch	Position
S01	TAPE/RADIO	TAPE
S03	FWD/REV	FWD
S04	MUTING	OFF
SW050	MAN +	OFF
SW051	MAN –	OFF
SW052	MONO	OFF
SW053	LOCAL	OFF
SW054	SEEK +	OFF
SW055	SEEK –	OFF
SW056	M.SCAN/A.MEM	OFF
SW057	1	OFF
SW058	2	OFF
SW059	3	OFF
SW060	4	OFF
SW061	5	OFF
SW062	6	OFF
SW063	BAND	FM
SW064	DC	OFF
SW065	METAL	OFF
SW066	AMS	OFF
SW451	FADER SELECT	OFF

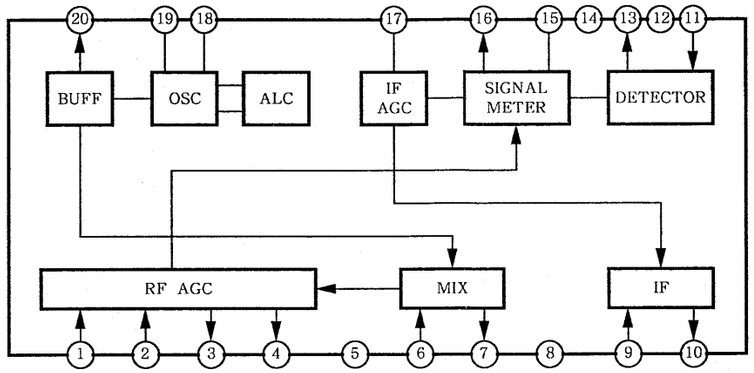
- : B+ Line
- Power voltage is dc 14.4V and fed with regulated dc power supply from external power voltage terminal.
- Voltage and waveforms are dc with respect to ground under no-signal (detuned) conditions.
- Voltages are taken with a VOM (50 kΩ/V). Voltage variations may be noted due to normal production tolerances.
- Waveforms are taken with a oscilloscope. Voltage variations may be noted due to normal production tolerances.
- Circled numbers refer to waveforms.
- Signal path. ⇨ : FM ⇨ : PB

5−4. IC BLOCK DIAGRAM

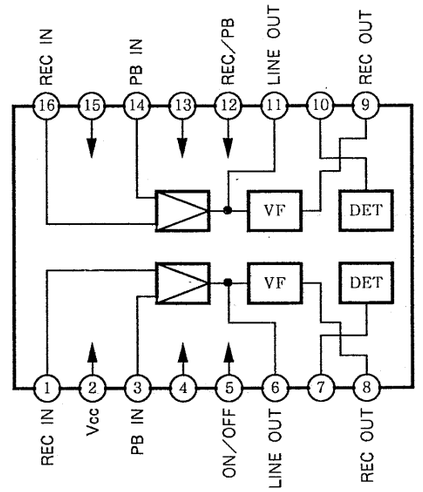
IC150 LA1140



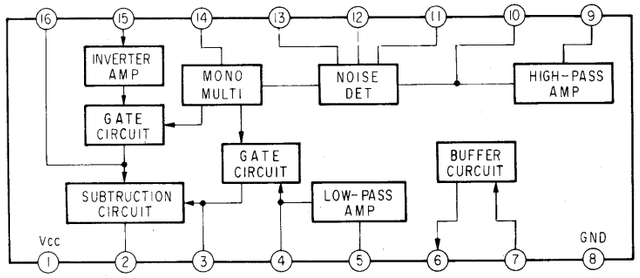
IC300 LA1135



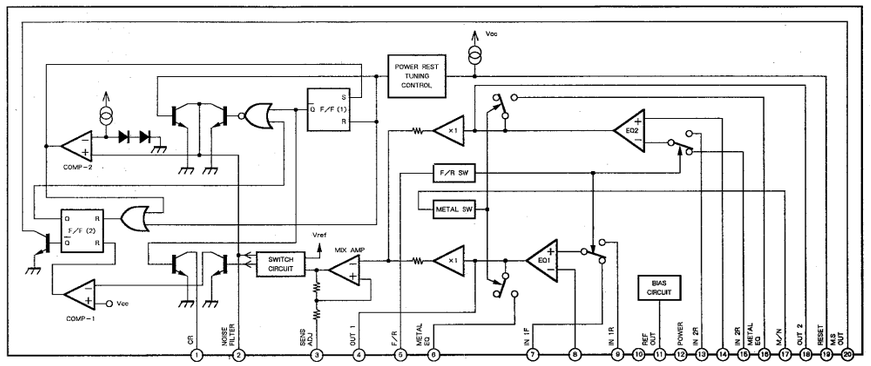
IC400 CXA1101P



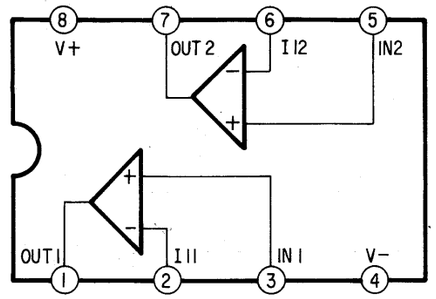
IC200 LA2110



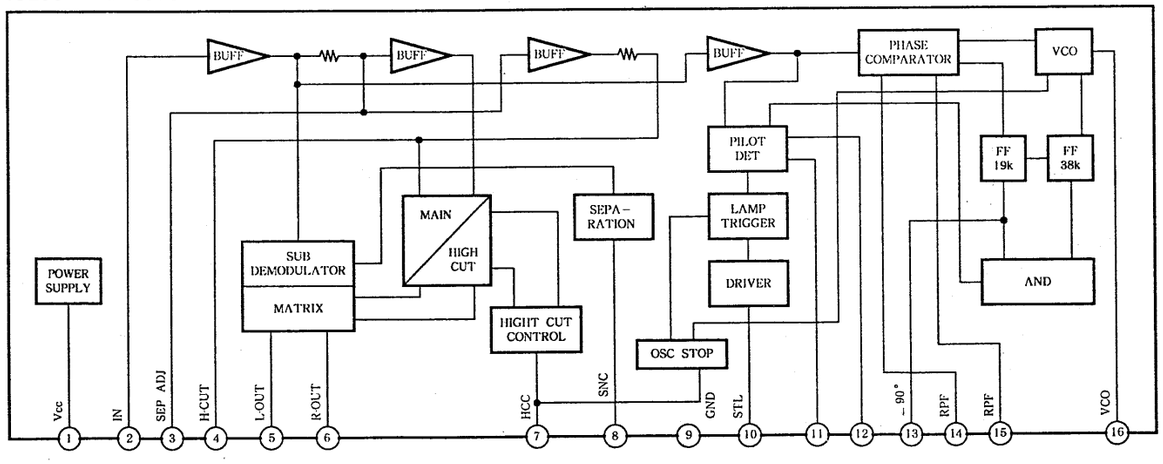
IC350 M51524L



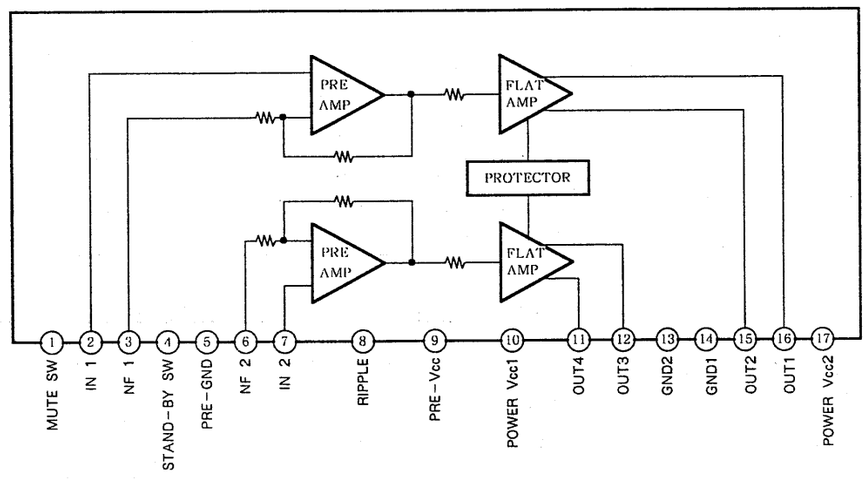
IC450 μ PC4558G2



IC250 LA3370



IC500 TA8210H

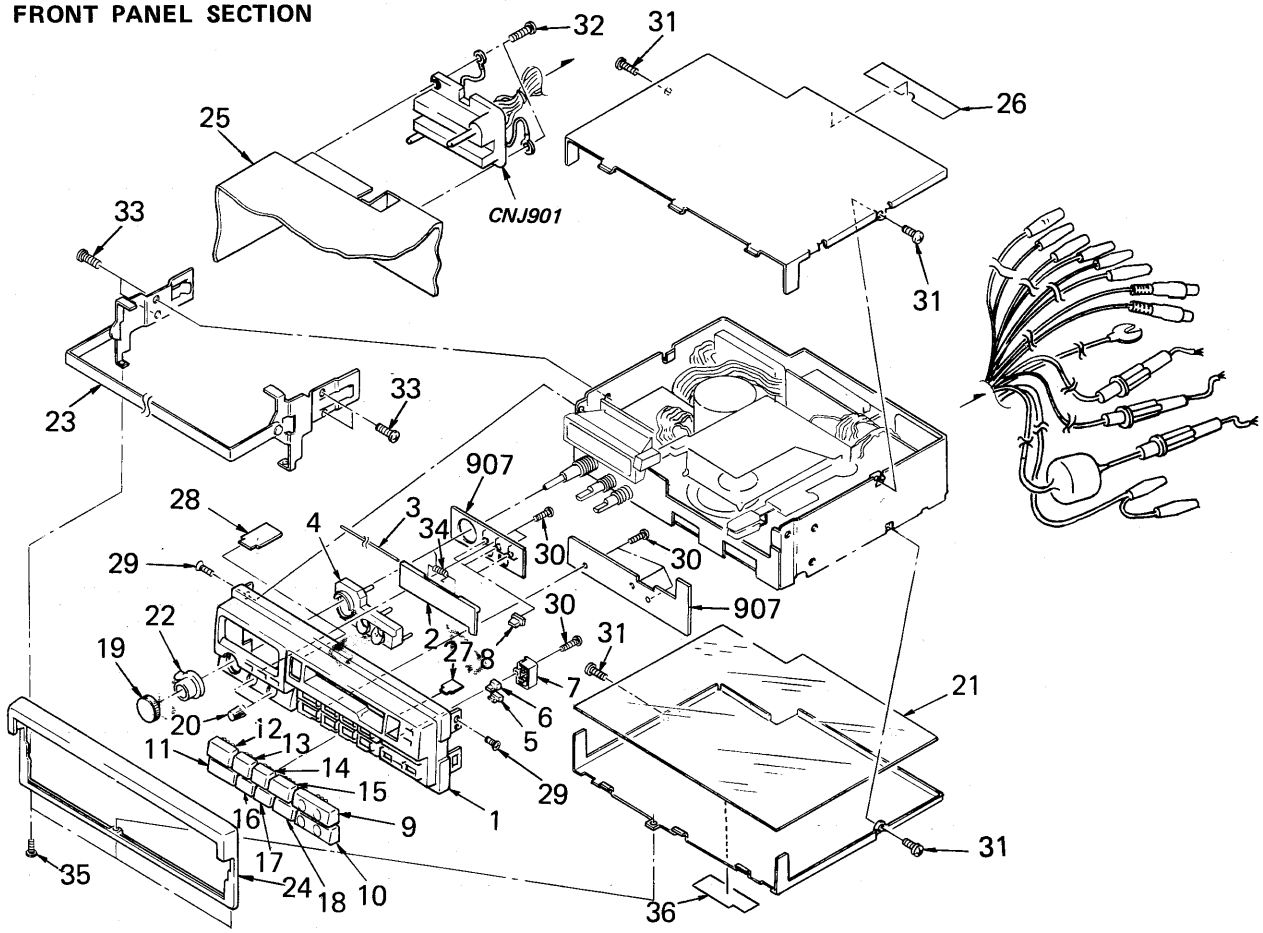


SECTION 6
EXPLODED VIEWS

NOTE:

- The mechanical parts with no reference number in the exploded views are not supplied.
- The construction parts of an assembled part are indicated with a collation number in the remark column.
- Items marked "★" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- Due to standardization, parts with part number suffix -XX and -X may be different from the parts specified in the components used on the set.

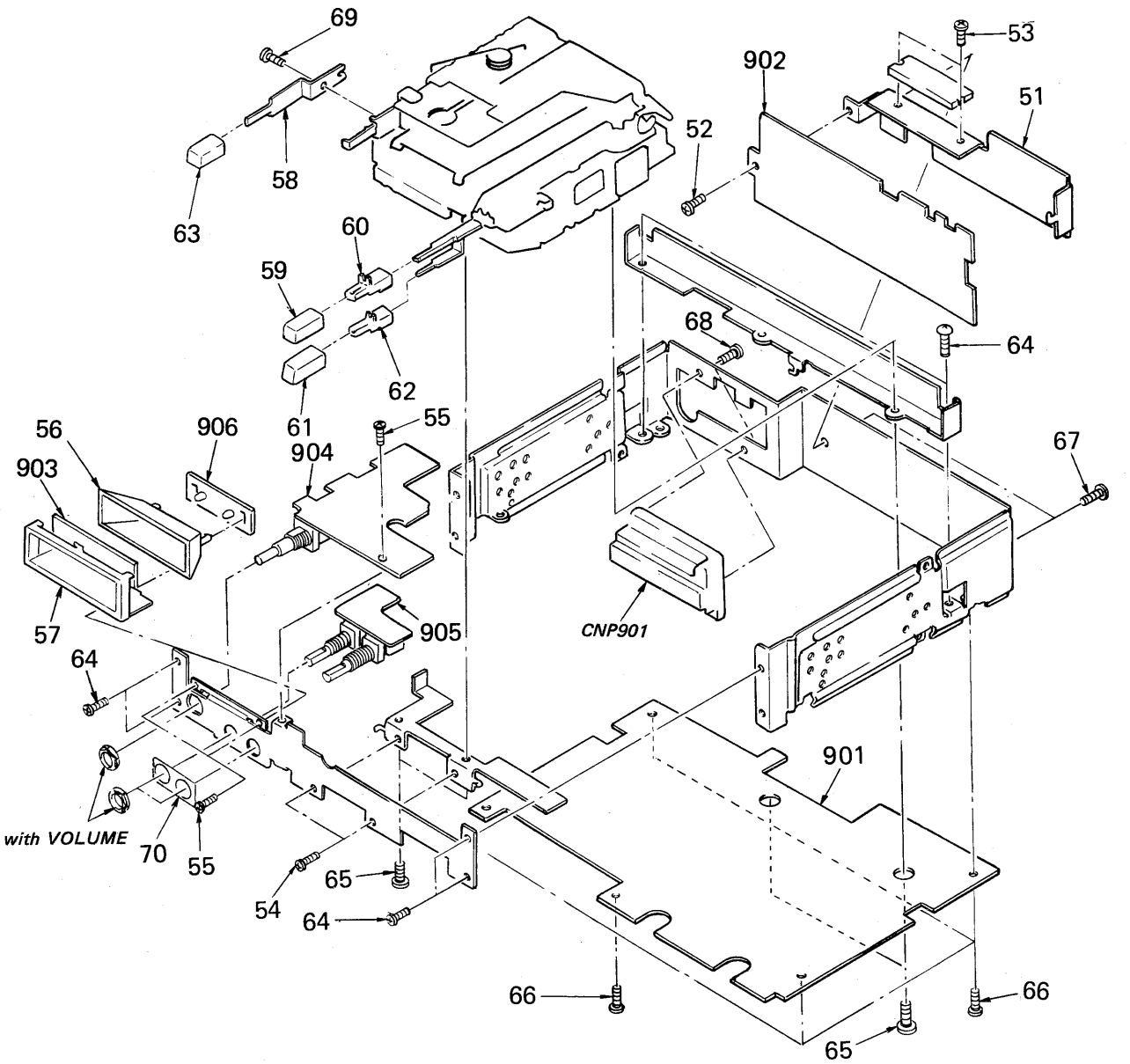
6-1. FRONT PANEL SECTION



No.	Part No.	Description	Remarks
1	X-3393-002-1	PANEL ASSY	
2	X-3393-003-1	DOOR ASSY	
3	3-325-708-01	SHAFT, CASSETTE DOOR	
4	3-393-029-01	ILLUMINATOR (VR)	
5	3-393-014-01	BUTTON (A), FUNCTION	
6	3-393-014-11	BUTTON (A), FUNCTION	
7	*3-393-017-01	HOLDER, BUTTON	
8	3-393-010-01	BUTTON (B), FUNCTION	
9	3-393-022-01	BUTTON, MANUAL	
10	3-393-020-01	BUTTON, SEEK	
11	3-393-021-01	BUTTON, BAND	
12	3-393-023-01	BUTTON, MEMORY	
13	3-393-024-01	BUTTON, PRESET	
14	3-393-024-11	BUTTON, PRESET	
15	3-393-024-21	BUTTON, PRESET	
16	3-393-024-31	BUTTON, PRESET	
17	3-393-024-41	BUTTON, PRESET	
18	3-393-024-51	BUTTON, PRESET	
19	X-3393-005-1	KNOB ASSY, VOLUME	
20	X-3393-006-1	KNOB ASSY, TONE	
21	*3-393-018-01	INSULATOR	

No.	Part No.	Description	Remarks
22	3-393-007-01	KNOB, FADER	
23	*X-3393-001-1	HANDLE ASSY	
24	3-340-640-11	FRAME, ORNAMENTAL	
25	*X-3340-603-3	BRACKET ASSY, SECURITY	
26	*3-393-004-01	COVER, DUST	
27	3-393-002-01	ILLUMINATOR (FF/REW)	
28	3-393-003-01	ILLUMINATOR (EJ)	
29	7-685-233-14	SCREW +KTP 2.6X6 TYPE2 NON-SLIT	
30	7-685-103-14	SCREW +PT 2X5	
31	7-682-147-01	SCREW +BVTT 3X6 (S)	
32	7-682-548-04	SCREW +B 3X8	
33	3-329-814-01	SCREW (M4X6)	
34	3-342-222-01	SPRING	
35	7-621-772-18	SCREW +B 2X4	
36	*3-345-901-01	(AEP).....LABEL, MODEL NUMBER (AE)	
	*3-345-902-01	(US).....LABEL, MODEL NUMBER	
	*3-345-907-01	(Canadian)...LABEL, MODEL NUMBER	
907	*1-626-056-11	PC BOARD, CONTROL	
CNJ901	1-559-385-11	CORD (WITH CONNECTOR) (SOCKET)	

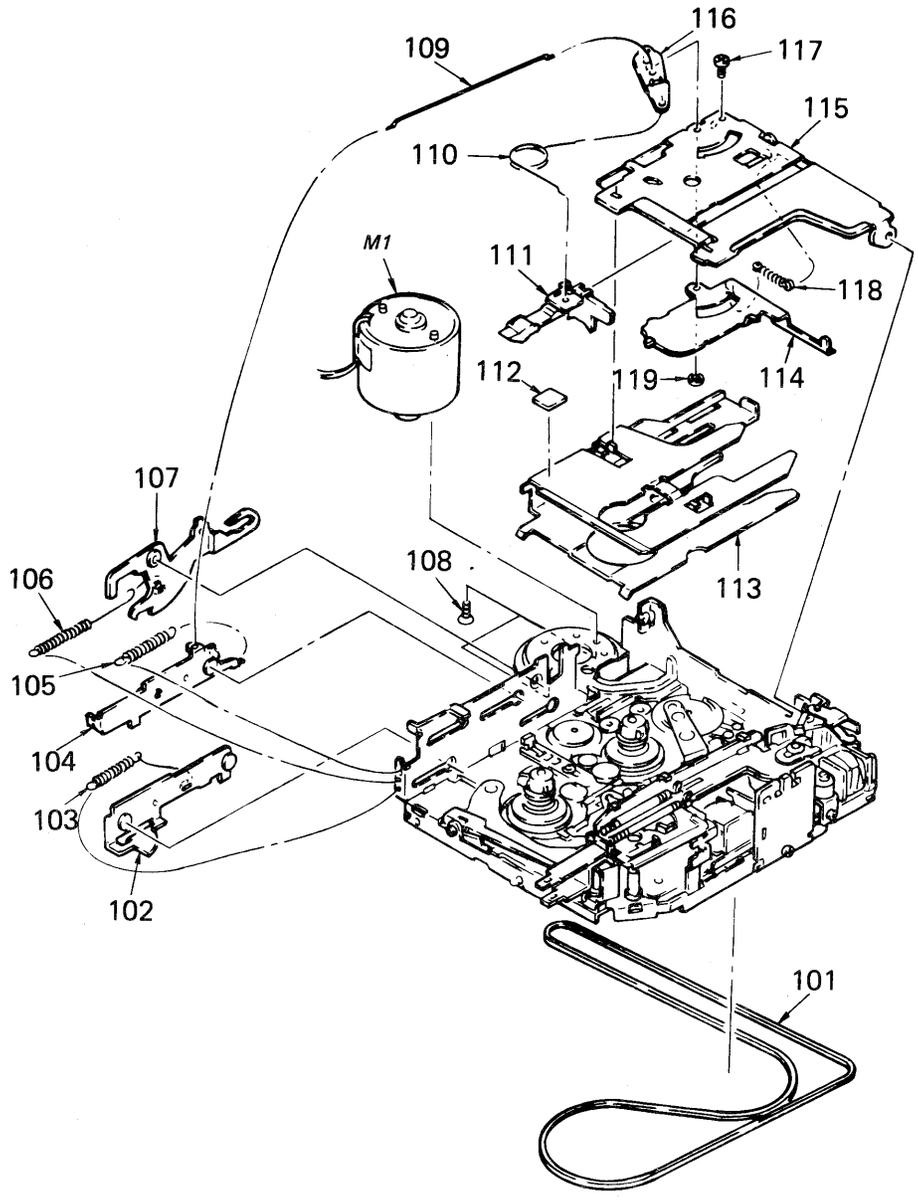
6-2. BOARD SECTION



No.	Part No.	Description	Remarks
51	*3-393-025-01	HEAT SINK	
52	7-685-646-79	SCREW +BVTP 3X8 TYPE2 N-S	
53	7-685-550-04	SCREW +BVTP 3X12 TYPE2 N-S	
54	7-621-773-86	SCREW +B 2.6X4	
55	7-621-771-06	SCREW +B 2X5	
56	*3-393-030-01	HOUSE, LAMP	
57	*3-393-028-01	HOLDER, LCD	
58	*3-393-016-01	LEVER, EJECT	
59	3-393-012-01	BUTTON, FF	
60	*3-393-009-01	HOLDER (F), BUTTON	
61	3-393-013-01	BUTTON, REW	
62	*3-393-008-01	HOLDER (R), BUTTON	
63	3-393-011-01	BUTTON, EJECT	
64	7-621-770-67	SCREW +B 2.6X6	

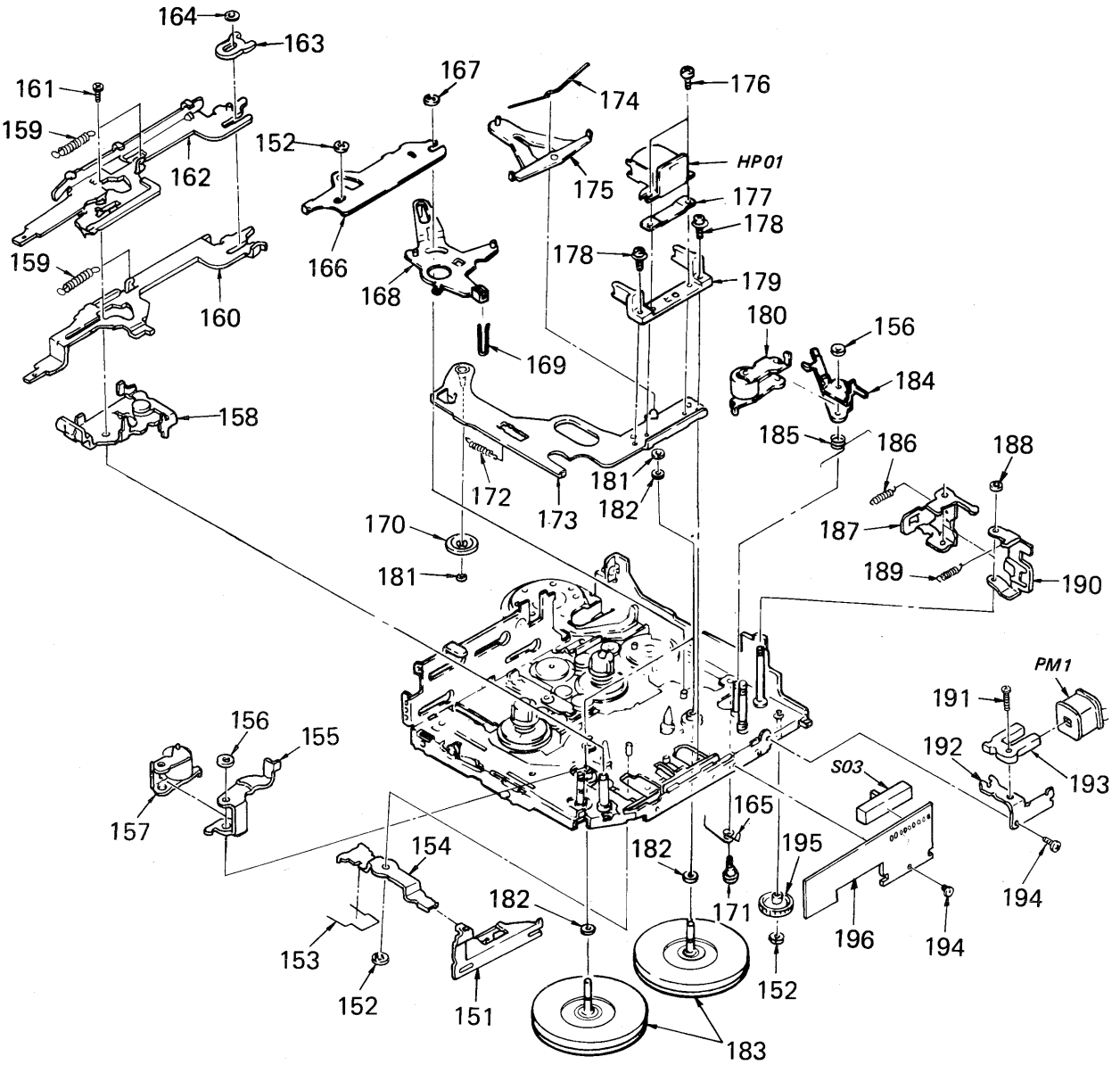
No.	Part No.	Description	Remarks
65	7-682-545-04	SCREW +B 3X4	
66	7-682-547-04	SCREW +B 3X6	
67	7-685-146-14	SCREW +PT 3X8	
68	7-682-548-04	SCREW +B 3X8	
69	7-627-556-08	SCREW +P 2.6X2.8	
70	*3-393-037-01	INSULATOR (B)	
901	*A-3260-761-A	(AEP).....MOUNTED PCB, MAIN	
	*A-3260-769-A	(US,Canadian)...MOUNTED PCB, MAIN	
902	*A-3270-480-A	MOUNTED PCB, POWER	
903	1-808-368-11	DISPLAY PANEL, LIQUID CRYSTAL	
904	*1-626-053-11	PC BOARD, VR	
905	*1-626-054-11	PC BOARD, TONE	
906	*1-626-055-11	PC BOARD, LAMP	
CNP901	1-574-105-11	CORD (WITH CONNECTOR)	

6-3. MECHANISM (MG-48-83)



No.	Part No.	Description	Remarks
101	3-390-635-01	BELT, MAIN	
102	*3-390-660-01	RIVETING ASSY, CH PUSH PLATE (M)	
103	3-390-663-01	SPRING (M)	
104	3-390-613-01	RIVETING ASSY, PUSH LEVER	
105	*3-390-653-01	SPRING	
106	*3-390-654-01	SPRING	
107	*3-390-685-01	LEVER	
108	7-627-452-07	SCREW, PRECISION +K 2X2	
109	*3-390-657-01	SPRING	
110	*3-390-658-01	SPRING	
111	3-390-689-01	SLIDER, PACK	
112	9-911-839-XX	RUBBER, CUSHION	
113	*3-390-691-01	CASE, CASSETTE	
114	*3-390-690-01	PLATE, C.D	
115	*3-390-688-01	LIFTER, CASE	
116	3-390-615-01	RIVETING ASSY, P.E PLATE	
117	7-627-553-47	SCREW +PTT 2X4 (S)	
118	*3-390-659-01	SPRING	
119	7-624-102-04	STOP, RING 1.5 TYPE-E	
M1	3-390-601-01	MOTOR ASSY	

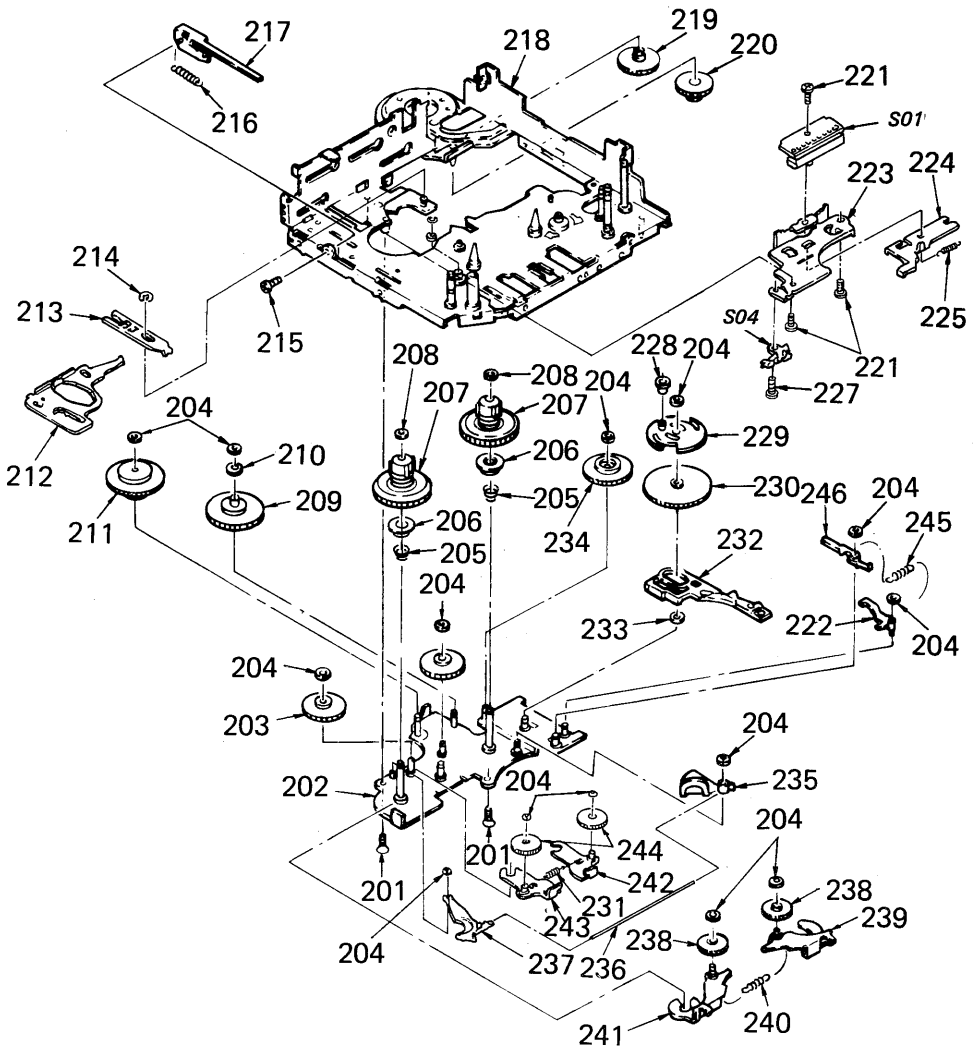
6-4.



No.	Part No.	Description	Remarks
151	3-390-676-01	PLATE, F.R SLIDE	
152	7-624-104-04	STOP, RING 2.0	
153	3-390-628-01	SPRING	
154	*3-390-627-01	PLATE, FUNCTION, F.R	
155	*3-390-629-01	PLATE, PULL	
156	3-318-323-01	RING, RETAING (3)	
157	3-390-605-01	ARM (R) ASSY, PINCH ROLLER	
158	*3-390-614-01	RIVETING ASSY, F.R BRACKET	
159	*3-390-656-01	SPRING	
160	*3-390-686-01	LEVER, REW	
161	7-628-253-90	SCREW +PS 2.6X4	
162	*3-390-687-01	LEVER, FF	
163	*3-390-655-01	PLATE, P.C	
164	3-701-437-11	WASHER (t=0.25)	
165	*3-390-674-01	SPRING	
166	*3-390-692-01	PLATE (M), MAIN	
167	7-624-102-04	STOP, RING 1.5 TYPE-E	
168	*3-390-602-01	RIVETING ASSY, SELECTION PLATE	
169	3-390-617-01	SPRING	
170	*3-390-666-01	ROLLER (M), H.P	
171	3-390-623-01	SCREW, COLOR	
172	3-390-665-01	SPRING (M)	
173	*3-390-662-01	RIVETING ASSY, HEAD PANEL (M)	
174	3-390-633-01	SPRING	
175	*3-390-632-01	PLATE, FUNCTION, P.R	
176	7-627-553-47	PRECISION SCREW +P 2X4 TYPE 3	

No.	Part No.	Description	Remarks
177	3-390-631-01	PLATE, SP, HEAD	
178	7-628-253-10	SCREW +PS 2X5	
179	*3-390-678-01	GUIDE, TAPE	
180	3-390-603-01	ARM (F) ASSY, PINCH ROLLER	
181	7-624-101-01	RING, RETAINING E-1.2	
182	3-701-437-01	WASHER (t=0.13)	
183	3-390-634-01	CAPSTAN, FL	
184	*3-390-673-01	PLATE, FUNCTION, T.S	
185	*3-390-675-01	SPRING	
186	3-390-619-01	SPRING	
187	*3-390-618-01	PLATE, LOCK, F.R	
188	3-701-439-01	WASHER (t=0.13)	
189	3-390-621-01	SPRING	
190	*3-390-620-01	PLATE, RELEASE, F.R	
191	7-685-783-01	SCREW +PTT 2X6 (S)	
192	*3-390-625-01	CORE	
193	*3-390-626-01	BRACKET, P.L	
194	7-685-780-09	SCREW +PTT 2X3 (S)	
195	3-390-622-01	PULLEY, MIDWAY	
196	3-390-710-01	HEAD (FPC)	
HP01	1-543-352-21	HEAD, MAGNETIC	
PM1	3-390-624-01	COIL ASSY, T	
S03	1-571-160-11	SWITCH, SLIDE	

6-5.



No.	Part No.	Description	Remarks
201	7-627-452-98	SCREW, PRECISION +K 2X3.5	
202	*3-390-606-01	RIVETING ASSY, MG PLATE	
203	*3-390-641-02	GEAR, F.T	
204	3-570-615-00	POLY-WASHER (DIA 1.2)	
205	*3-390-648-01	SPRING	
206	*3-390-649-01	PIECE, E.D	
207	3-390-612-01	REEL SUB ASSY, TAKE-UP	
208	3-307-948-11	WASHER, NYLON	
209	*3-390-643-01	GEAR (LOWER), DEVICE	
210	*3-390-642-01	GEAR (UPPER), DEVICE	
211	3-390-611-01	CLUTCH ASSY, F.R	
212	*3-390-677-01	PLATE, FUNCTION, T.G	
213	*3-390-630-01	PLATE, PUSH, T.G	
214	7-624-104-04	STOP RING 2.0	
215	7-627-452-07	SCREW, PRECISION +K 2X2	
216	*3-390-668-01	SPRING	
217	*3-390-667-01	PLATE, TIMING	
218	*3-390-672-01	RIVETING ASSY, CHASSIS	
219	3-390-741-01	GEAR (A), MIDWAY	
220	3-390-616-01	GEAR, MAIN	
221	7-685-780-09	SCREW +PTT 2X3 (S)	
222	*3-390-684-01	ARM, TRIGGER	
223	*3-390-693-01	BRACKET, P.S (M)	
224	*3-390-652-01	PLATE, FUNCTION, SWITCH	

No.	Part No.	Description	Remarks
225	3-390-664-01	SPRING (M)	
227	7-627-852-48	PRECISION SCREW +P1.7X3.5 TYPE3	
228	*3-390-650-01	COLLAR, REVERSE GEAR	
229	*3-390-682-01	GEAR, REVERSE	
230	*3-390-646-01	GEAR, T.S FUNCTION	
231	3-390-636-01	SPRING (A)	
232	*3-390-681-01	PLATE, E.S	
233	3-701-439-01	WASHER (t=0.13)	
234	*3-390-644-01	GEAR, D.T	
235	*3-390-679-01	PLATE (F), E.D	
236	*3-390-638-01	BAR, E.S PUSH	
237	*3-390-680-01	PLATE (R), E.D	
238	*3-390-640-01	GEAR, T	
239	*3-390-609-01	RIVETING ASSY, TG PLATE (F)	
240	*3-390-639-01	SPRING	
241	*3-390-610-01	RIVETING ASSY, TG PLATE (R)	
242	*3-390-607-01	RIVETING ASSY, FG PLATE	
243	*3-390-608-01	RIVETING ASSY, RG PLATE	
244	3-390-637-01	GEAR, F	
245	*3-390-647-01	SPRING	
246	*3-390-683-01	ARM, STOP	
S01	3-390-661-01	BASE (M) ASSY, P (TAPE/RADIO)	
S04	1-570-697-11	SWITCH, LEAF (MUTING)	

SECTION 7
ELECTRICAL PARTS LIST

NOTE:

- Due to standardization, replacements in the parts list may be different from the parts specified in the diagrams or the components used on the set.
- Items marked "★" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- If there are two or more same circuits in a set such as a stereophonic machine, only typical circuit parts may be indicated and capacitors and resistors in other same circuits may be omitted.

CAPACITORS:
MF: μF, PF: μμF.

RESISTORS
- All resistors are in ohms.
- F: nonflammable

COILS
- MMH: mH, UH: μH

SEMICONDUCTORS
In each case, U: μ, for example:
UA...: μA..., UPA...: μPA...,
UPC...: μPC, UPD...: μPD...

Ref.No.	Part No.	Description			
901	*A-3260-761-A	(AEP).....MOUNTED PCB, MAIN			
	*A-3260-769-A	(US,Canadian)...MOUNTED PCB, MAIN			
902	*A-3270-480-A	MOUNTED PCB, POWER			
903	1-808-368-11	DISPLAY PANEL, LIQUID CRYSTAL			
904	*1-626-053-11	PC BOARD, VR			
905	*1-626-054-11	PC BOARD, TONE			
906	*1-626-055-11	PC BOARD, LAMP			
907	*1-626-056-11	PC BOARD, CONTROL			
BT001	1-528-225-11	BATTERY, LITHIUM			
C001	1-124-477-11	ELECT	47MF	20%	16V
C002	1-161-021-11	CERAMIC	0.047MF	10%	25V
C003	1-131-345-00	TANTALUM	0.47MF	20%	16V
C004	1-131-419-00	TANTALUM	2.2MF	20%	10V
C005	1-161-055-00	CERAMIC	0.022MF	10%	25V
C006	1-161-021-11	CERAMIC	0.047MF	10%	25V
C007	1-161-051-00	CERAMIC	0.01MF	10%	25V
C009	1-161-051-00	CERAMIC	0.01MF	10%	25V
C010	1-161-057-00	CERAMIC	0.033MF	10%	25V
C011	1-124-245-00	ELECT	4.7MF	20%	25V
C012	1-102-959-00	CERAMIC	22PF	5%	50V
C013	1-102-959-00	CERAMIC	22PF	5%	50V
C014	1-124-236-00	ELECT	47MF	20%	10V
C015	1-124-444-00	ELECT	220MF	20%	10V
C016	1-124-462-00	ELECT	10MF	20%	16V
C017	1-124-443-00	ELECT	100MF	20%	10V
C018	1-124-444-00	ELECT	220MF	20%	10V
C019	1-126-103-11	ELECT	470MF	20%	16V
C020	1-124-444-00	ELECT	220MF	20%	10V
C022	1-124-462-00	ELECT	10MF	20%	16V
C150	1-102-959-00	CERAMIC	22PF	5%	50V
C151	1-161-055-00	CERAMIC	0.022MF	10%	25V
C152	1-161-055-00	CERAMIC	0.022MF	10%	25V
C153	1-161-055-00	CERAMIC	0.022MF	10%	25V
C154	1-161-055-00	CERAMIC	0.022MF	10%	25V
C155	1-124-255-00	ELECT	1MF	20%	50V
C156	1-124-245-00	ELECT	4.7MF	20%	25V
C157	1-102-936-00	CERAMIC	3PF	0.25PF	50V
C158	1-161-055-00	CERAMIC	0.022MF	10%	25V
C159	1-124-462-00	ELECT	10MF	20%	16V
C160	1-161-055-00	CERAMIC	0.022MF	10%	25V
C161	1-161-055-00	CERAMIC	0.022MF	10%	25V
C162	1-102-963-00	CERAMIC	33PF	5%	50V
C163	1-161-021-11	CERAMIC	0.047MF	10%	25V
C165	1-124-462-00	ELECT	10MF	20%	16V
C166	1-161-055-00	CERAMIC	0.022MF	10%	25V
C167	1-102-110-00	CERAMIC	220PF	10%	50V
C200	1-124-255-00	ELECT	1MF	20%	50V
C201	1-101-888-00	CERAMIC	68PF	5%	50V
C202	1-102-118-00	CERAMIC	0.0012MF	10%	50V
C203	1-102-116-00	CERAMIC	680PF	10%	50V
C204	1-102-116-00	CERAMIC	680PF	10%	50V
C205	1-102-127-00	CERAMIC	0.0068MF	10%	50V
C206	1-102-114-00	CERAMIC	470PF	10%	50V
C207	1-102-114-00	CERAMIC	470PF	10%	50V
C208	1-102-114-00	CERAMIC	470PF	10%	50V
C209	1-102-114-00	CERAMIC	470PF	10%	50V
C210	1-102-106-00	CERAMIC	100PF	10%	50V
C211	1-102-121-00	CERAMIC	0.0022MF	10%	50V
C212	1-124-234-00	ELECT	22MF	20%	10V
C213	1-161-051-00	CERAMIC	0.01MF	10%	25V
C214	1-161-051-00	CERAMIC	0.01MF	10%	25V
C250	1-161-041-00	CERAMIC	0.0015MF	10%	25V
C251	1-124-444-00	ELECT	220MF	20%	10V
C252	1-124-255-00	ELECT	1MF	20%	50V
C253	1-124-462-00	ELECT	10MF	20%	16V
C254	1-161-050-00	CERAMIC	0.0082MF	10%	25V
C255	1-161-021-11	CERAMIC	0.047MF	10%	25V
C256	1-124-462-00	ELECT	10MF	20%	16V
C257	1-124-255-00	ELECT	1MF	20%	50V
C258	1-124-258-00	ELECT	3.3MF	20%	50V
C259	1-130-471-00	FILM	0.001MF	5%	50V
C260	1-124-255-00	ELECT	1MF	20%	50V
C270	1-161-017-00	CERAMIC	0.022MF	10%	25V
C280	1-161-017-00	CERAMIC	0.022MF	10%	25V
C300	1-161-021-11	CERAMIC	0.047MF	10%	25V
C301	1-161-021-11	CERAMIC	0.047MF	10%	25V
C304	1-124-222-00	ELECT	22MF	20%	6.3V
C306	1-102-961-00	CERAMIC	27PF	5%	50V
C307	1-161-021-11	CERAMIC	0.047MF	10%	25V
C308	1-124-236-00	ELECT	47MF	20%	10V
C309	1-124-258-00	ELECT	3.3MF	20%	25V
C310	1-161-021-11	CERAMIC	0.047MF	10%	25V
C311	1-161-021-11	CERAMIC	0.047MF	10%	25V
C312	1-124-255-00	ELECT	1MF	20%	50V
C313	1-124-465-00	ELECT	0.47MF	20%	50V
C314	1-161-021-11	CERAMIC	0.047MF	10%	25V
C315	1-161-051-00	CERAMIC	0.01MF	10%	25V
C316	1-161-021-11	CERAMIC	0.047MF	10%	25V
C317	1-161-021-11	CERAMIC	0.047MF	10%	25V
C319	1-124-443-00	ELECT	100MF	20%	10V

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Ref.No.	Part No.	Description			
C320	1-102-963-00	CERAMIC	33PF	5%	50V
C322	1-136-368-11	FILM	560PF	5%	50V
C324	1-161-021-11	CERAMIC	0.047MF	10%	25V
C323	1-161-021-11	CERAMIC	0.047MF	10%	25V
C350	1-126-101-11	ELECT	100MF	20%	16V
C351	1-124-257-00	ELECT	2.2MF	20%	50V
C352	1-124-474-00	ELECT	47MF	20%	16V
C353	1-124-258-00	ELECT	3.3MF	20%	50V
C354	1-124-462-00	ELECT	10MF	20%	16V
C355	1-124-463-00	ELECT	0.1MF	20%	50V
C356	1-124-462-00	ELECT	10MF	20%	16V
C357	1-124-234-00	ELECT	22MF	20%	10V
C358	1-124-462-00	ELECT	10MF	20%	16V
C370	1-124-257-00	ELECT	2.2MF	20%	50V
C371	1-124-234-00	ELECT	22MF	20%	10V
C372	1-161-051-00	CERAMIC	0.01MF	10%	25V
C373	1-161-039-00	CERAMIC	0.001MF	10%	25V
C380	1-124-257-00	ELECT	2.2MF	20%	50V
C381	1-124-234-00	ELECT	22MF	20%	10V
C382	1-161-051-00	CERAMIC	0.01MF	10%	25V
C383	1-161-039-00	CERAMIC	0.001MF	10%	25V
C400	1-124-462-00	ELECT	10MF	20%	16V
C401	1-131-410-00	TANTALUM	0.68MF	20%	16V
C402	1-131-410-00	TANTALUM	0.68MF	20%	16V
C403	1-124-255-00	ELECT	1MF	20%	50V
C404	1-124-443-00	ELECT	100MF	20%	10V
C405	1-124-443-00	ELECT	100MF	20%	10V
C410	1-124-255-00	ELECT	1MF	20%	50V
C411	1-124-255-00	ELECT	1MF	20%	50V
C412	1-124-245-00	ELECT	4.7MF	20%	25V
C420	1-124-255-00	ELECT	1MF	20%	50V
C421	1-124-255-00	ELECT	1MF	20%	50V
C422	1-124-245-00	ELECT	4.7MF	20%	25V
C450	1-124-462-00	ELECT	10MF	20%	16V
C451	1-124-236-00	ELECT	47MF	20%	10V
C460	1-102-936-00	CERAMIC	3PF	0.25PF	50V
C461	1-161-047-00	CERAMIC	0.0047MF	10%	25V
C462	1-161-057-00	CERAMIC	0.033MF	10%	25V
C463	1-124-464-11	ELECT	0.22MF	20%	50V
C464	1-124-463-00	ELECT	0.1MF	20%	50V
C465	1-102-121-00	CERAMIC	0.0022MF	10%	50V
C466	1-124-257-00	ELECT	2.2MF	20%	35V
C467	1-124-245-00	ELECT	4.7MF	20%	16V
C468	1-124-257-00	ELECT	2.2MF	20%	35V
C469	1-124-257-00	ELECT	2.2MF	20%	35V
C470	1-161-055-00	CERAMIC	0.022MF	10%	25V
C471	1-161-047-00	CERAMIC	0.0047MF	10%	25V
C472	1-161-057-00	CERAMIC	0.033MF	10%	25V
C473	1-124-464-11	ELECT	0.22MF	20%	50V
C474	1-124-463-00	ELECT	0.1MF	20%	50V
C475	1-102-121-00	CERAMIC	0.0022MF	10%	50V
C476	1-124-257-00	ELECT	2.2MF	20%	35V
C477	1-124-245-00	ELECT	4.7MF	20%	16V
C478	1-124-257-00	ELECT	2.2MF	20%	35V
C479	1-124-257-00	ELECT	2.2MF	20%	35V
C481	1-102-106-11	CERAMIC	100P	10%	50V
C491	1-102-106-11	CERAMIC	100P	10%	50V

Ref.No.	Part No.	Description			
C500	1-123-566-00	ELECT	2200MF	20%	16V
C501	1-124-444-00	ELECT	220MF	20%	10V
C510	1-124-257-00	ELECT	2.2MF	20%	50V
C511	1-161-047-00	CERAMIC	0.0047MF	10%	25V
C512	1-124-234-00	ELECT	22MF	20%	10V
C513	1-161-772-11	CERAMIC	0.1MF	10%	25V
C514	1-161-772-11	CERAMIC	0.1MF	10%	25V
C520	1-124-257-00	ELECT	2.2MF	20%	50V
C521	1-161-047-00	CERAMIC	0.0047MF	10%	25V
C522	1-124-234-00	ELECT	22MF	20%	10V
C523	1-161-772-11	CERAMIC	0.1MF	10%	25V
C524	1-161-772-11	CERAMIC	0.1MF	10%	25V
CF150	1-567-389-11	FILTER, CERAMIC			
CF300	1-577-103-11	(AEP).....VIBRATOR, CERAMIC			
CF300	1-577-104-11	(US,Canadian)...VIBRATOR, CERAMIC			
CF301	1-577-100-11	(AEP).....FILTER, CERAMIC			
CF301	1-577-105-11	(US,Canadian)...FILTER, CERAMIC			
CNJ901	1-575-910-11	CORD (WITH CONNECTOR) (SOCKET)			
CNP901	1-574-105-11	CORD (WITH CONNECTOR)			
CP150	1-519-421-11	GAP, DISCHARGE			
D001	8-719-100-30	DIODE RD5.1EB2			
D002	8-719-901-33	DIODE 1SS133			
D003	8-719-901-33	DIODE 1SS133			
D004	8-719-901-33	DIODE 1SS133			
D005	8-719-901-33	DIODE 1SS133			
D006	8-719-901-33	DIODE 1SS133			
D007	8-719-901-33	DIODE 1SS133			
D008	8-719-901-33	DIODE 1SS133			
D009	8-719-901-33	DIODE 1SS133			
D010	8-719-200-02	DIODE 10E-2			
D011	8-719-901-33	DIODE 1SS133			
D012	8-719-104-10	DIODE 1SS99			
D013	8-719-901-33	DIODE 1SS133			
D014	8-719-901-33	DIODE 1SS133			
D015	8-719-901-33	DIODE 1SS133			
D016	8-719-901-33	DIODE 1SS133			
D017	8-719-100-57	DIODE RD10EB2			
D018	8-719-100-57	DIODE RD10EB2			
D019	8-719-100-57	DIODE RD10EB2			
D020	8-719-200-02	DIODE 10E-2			
D021	8-719-910-65	DIODE HZ6B2L			
D040	8-719-901-33	(AEP)...DIODE 1SS133			
D041	8-719-901-33	(US,Canadian)...DIODE 1SS133			
D050	8-719-918-66	DIODE GL-1HY102			
D051	8-719-918-66	DIODE GL-1HY102			
D052	8-719-918-66	DIODE GL-1HY102			
D053	8-719-918-66	DIODE GL-1HY102			
D054	8-719-918-66	DIODE GL-1HY102			
D055	8-719-918-66	DIODE GL-1HY102			
D056	8-719-918-66	DIODE GL-1HY102			
D057	8-719-918-66	DIODE GL-1HY102			
D058	8-719-918-66	DIODE GL-1HY102			
D059	8-719-918-66	DIODE GL-1HY102			

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Ref.No.	Part No.	Description
D060	8-719-918-66	DIODE GL-1HY102
D061	8-719-918-66	DIODE GL-1HY102
D062	8-719-918-66	DIODE GL-1HY102
D063	8-719-918-66	DIODE GL-1HY102
D064	8-719-918-66	DIODE GL-1HY102
D065	8-719-918-66	DIODE GL-1HY102
D066	8-719-918-66	DIODE GL-1HY102
D067	8-719-918-66	DIODE GL-1HY102
D068	8-719-918-66	DIODE GL-1HY102
D069	8-719-918-66	DIODE GL-1HY102
D070	8-719-918-66	DIODE GL-1HY102
D250	8-719-901-33	DIODE 1SS133
D300	8-719-903-24	DIODE SVC321SP-A2
D301	8-719-903-24	DIODE SVC321SP-A2
D302	8-719-903-24	DIODE SVC321SP-A2
D303	8-719-901-33	DIODE 1SS133
D350	8-719-200-02	DIODE 10E-2
D400	8-719-100-57	DIODE RD10EB2
D450	8-719-100-30	DIODE RD5.1EB2
D451	8-719-100-30	DIODE RD5.1EB2
D500	8-719-945-59	DIODE DSA3A4
D501	8-719-200-02	DIODE 10E-2
HP01	1-543-352-21	HEAD, MAGNETIC
IC001	1-808-372-11	IC UPD1708AG-765-00
IC150	8-759-811-40	IC LA1140
IC200	8-759-800-17	IC LA2110
IC250	8-759-833-70	IC LA3370
IC300	1-806-985-11	IC LA1135
IC350	1-808-383-11	IC M51524L
IC400	8-752-031-83	IC CXA1101P
IC450	8-759-100-96	IC UPC4558G2
IC500	8-759-230-25	IC TA8210H
L150	1-410-332-11	INDUCTOR 47UH
L151	1-410-312-11	INDUCTOR 0.22UH
L300	1-410-332-11	INDUCTOR 47UH
M01	3-390-601-01	MOTOR ASSY
PL001	1-518-635-11	LAMP, PILOT
PL002	1-518-635-11	LAMP, PILOT
PM1	3-390-624-01	COIL ASSY, T
Q001	8-729-902-11	TRANSISTOR 2SC2021-Q
Q002	8-729-902-11	TRANSISTOR 2SC2021-Q
Q003	8-729-902-11	TRANSISTOR 2SC2021-Q
Q004	8-729-993-72	TRANSISTOR 2SA937-Q
Q005	8-729-993-72	TRANSISTOR 2SA937-Q
Q006	8-729-806-12	TRANSISTOR DTA114YK
Q007	8-729-806-12	TRANSISTOR DTA114YK
Q008	8-729-806-30	TRANSISTOR DTC114YK
Q009	8-729-806-30	TRANSISTOR DTC114YK
Q010	8-729-993-72	TRANSISTOR 2SC2021-Q
Q011	1-807-187-11	TRANSISTOR DTA124F
Q014	8-729-987-42	TRANSISTOR 2SA874-Q
Q015	8-729-902-11	TRANSISTOR 2SC2021-Q
Q016	8-729-806-30	TRANSISTOR DTC114YK
Q017	8-729-186-23	TRANSISTOR 2SD862-F
Q018	8-729-100-13	TRANSISTOR 2SC2001-K2
Q019	8-729-902-11	TRANSISTOR 2SC2021-Q
Q020	8-729-186-23	TRANSISTOR 2SD862-F

Ref.No.	Part No.	Description
Q150	8-729-806-30	TRANSISTOR DTC114YK
Q151	8-729-902-11	TRANSISTOR 2SC2021-Q
Q250	8-729-806-32	TRANSISTOR DTC114TK
Q300	8-729-902-11	TRANSISTOR 2SC2021-Q
Q301	8-729-902-11	TRANSISTOR 2SC2021-Q
Q302	1-808-375-11	TRANSISTOR 2SK427
Q350	8-729-902-11	TRANSISTOR 2SC2021-Q
Q351	8-729-186-23	TRANSISTOR 2SD862-F
Q352	8-729-806-30	TRANSISTOR DTC114YK
Q460	8-729-807-13	TRANSISTOR 2SD1802-T
Q461	8-729-805-40	TRANSISTOR 2SC3900
Q470	8-729-807-13	TRANSISTOR 2SD1802-T
Q471	8-729-805-40	TRANSISTOR 2SC3900
Q510	8-729-807-13	TRANSISTOR 2SD1802-T
Q520	8-729-807-13	TRANSISTOR 2SD1802-T
R59	1-247-713-11	CARBON 1K 1% 1/4W
R001	1-249-393-11	CARBON 10 5% 1/4W
R002	1-249-441-11	CARBON 100K 5% 1/4W
R003	1-249-419-11	CARBON 1.5K 5% 1/4W
R004	1-249-417-11	CARBON 1K 5% 1/4W
R005	1-249-414-11	CARBON 560 5% 1/4W
R006	1-249-417-11	CARBON 1K 5% 1/4W
R007	1-249-437-11	CARBON 47K 5% 1/4W
R008	1-249-425-11	CARBON 4.7K 5% 1/4W
R009	1-249-433-11	CARBON 22K 5% 1/4W
R010	1-249-433-11	CARBON 22K 5% 1/4W
R011	1-249-433-11	CARBON 22K 5% 1/4W
R012	1-249-433-11	CARBON 22K 5% 1/4W
R013	1-249-417-11	CARBON 1K 5% 1/4W
R014	1-249-417-11	CARBON 1K 5% 1/4W
R015	1-247-887-00	CARBON 220K 5% 1/4W
R016	1-249-433-11	CARBON 22K 5% 1/4W
R017	1-249-433-11	CARBON 22K 5% 1/4W
R018	1-249-441-11	CARBON 100K 5% 1/4W
R019	1-249-416-11	CARBON 820 5% 1/4W
R020	1-249-422-11	CARBON 2.7K 5% 1/4W
R021	1-249-429-11	CARBON 10K 5% 1/4W
R022	1-249-421-11	CARBON 2.2K 5% 1/4W
R023	1-249-433-11	CARBON 22K 5% 1/4W
R024	1-249-413-11	CARBON 470 5% 1/4W
R025	1-249-417-11	CARBON 1K 5% 1/4W
R026	1-249-437-11	CARBON 47K 5% 1/4W
R027	1-249-405-11	CARBON 100 5% 1/4W
R030	1-247-831-11	CARBON 1K 5% 1/4W
R031	1-249-393-11	CARBON 10 5% 1/4W
R032	1-249-430-11	CARBON 12K 5% 1/4W
R033	1-249-417-11	CARBON 1K 5% 1/4W
R034	1-249-451-11	CARBON 2.2 1% 1/4W
R035	1-249-417-11	CARBON 1K 5% 1/4W
R040	1-249-425-11	(AEP)...CARBON 4.7K 5% 1/4W
R041	1-247-847-00	(US,Canadian)...CARBON 4.7K 5% 1/4W
R050	1-249-411-11	CARBON 330 5% 1/4W
R051	1-249-411-11	CARBON 330 5% 1/4W
R052	1-249-411-11	CARBON 330 5% 1/4W
R053	1-249-411-11	CARBON 330 5% 1/4W
R054	1-249-411-11	CARBON 330 5% 1/4W
R055	1-249-411-11	CARBON 330 5% 1/4W

Ref.No.	Part No.	Description			
R056	1-249-411-11	CARBON	330	5%	1/4W
R057	1-247-713-11	CARBON	1K	1%	1/4W
R058	1-247-713-11	CARBON	1K	1%	1/4W
R150	1-215-487-00	CARBON	560K	5%	1/4W
R151	1-247-819-00	CARBON	330	5%	1/4W
R152	1-249-439-11	CARBON	68K	5%	1/4W
R153	1-249-432-11	CARBON	18K	5%	1/4W
R154	1-249-431-11	CARBON	15K	5%	1/4W
R155	1-249-437-11	CARBON	47K	5%	1/4W
R156	1-249-428-11	CARBON	8.2K	5%	1/4W
R157	1-249-437-11	CARBON	47K	5%	1/4W
R158	1-249-417-11	CARBON	1K	5%	1/4W
R159	1-249-429-11	CARBON	10K	5%	1/4W
R200	1-249-425-11	CARBON	4.7K	5%	1/4W
R201	1-249-425-11	CARBON	4.7K	5%	1/4W
R202	1-249-425-11	CARBON	4.7K	5%	1/4W
R203	1-249-425-11	CARBON	4.7K	5%	1/4W
R204	1-249-424-11	CARBON	3.9K	5%	1/4W
R205	1-249-421-11	CARBON	2.2K	5%	1/4W
R206	1-249-421-11	CARBON	2.2K	5%	1/4W
R207	1-249-422-11	CARBON	2.7K	5%	1/4W
R208	1-249-441-11	CARBON	100K	5%	1/4W
R209	1-249-433-11	CARBON	22K	5%	1/4W
R210	1-249-427-11	CARBON	6.8K	5%	1/4W
R211	1-249-433-11	CARBON	22K	5%	1/4W
R212	1-249-408-11	CARBON	180	5%	1/4W
R250	1-249-417-11	CARBON	1K	5%	1/4W
R251	1-249-427-11	CARBON	6.8K	5%	1/4W
R252	1-249-433-11	CARBON	22K	5%	1/4W
R253	1-249-441-11	CARBON	100K	5%	1/4W
R254	1-249-429-11	CARBON	10K	5%	1/4W
R255	1-249-417-11	CARBON	1K	5%	1/4W
R256	1-249-433-11	CARBON	22K	5%	1/4W
R257	1-249-441-11	CARBON	100K	5%	1/4W
R270	1-249-423-11	CARBON	3.3K	5%	1/4W
R280	1-249-423-11	CARBON	3.3K	5%	1/4W
R300	1-249-397-11	CARBON	22	5%	1/4W
R301	1-249-385-00	CARBON	2.2	5%	1/4W
R302	1-249-441-11	CARBON	100K	5%	1/4W
R305	1-247-879-00	CARBON	100K	5%	1/4W
R306	1-249-429-11	CARBON	10K	5%	1/4W
R307	1-249-429-11	CARBON	10K	5%	1/4W
R308	1-249-429-00	CARBON	10K	5%	1/4W
R309	1-249-422-11	CARBON	2.7K	5%	1/4W
R310	1-249-405-11	CARBON	100	5%	1/4W
R311	1-249-404-00	CARBON	82	5%	1/4W
R312	1-249-417-11	CARBON	1K	5%	1/4W
R313	1-249-404-00	CARBON	82	5%	1/4W
R314	1-249-437-11	CARBON	47K	5%	1/4W
R315	1-249-437-11	CARBON	47K	5%	1/4W
R316	1-249-429-11	CARBON	10K	5%	1/4W
R319	1-249-441-11	CARBON	100K	5%	1/4W
R322	1-249-441-11	CARBON	100K	5%	1/4W
R324	1-249-441-11	CARBON	100K	5%	1/4W
R350	1-249-405-11	CARBON	100	5%	1/4W
R351	1-249-431-11	CARBON	15K	5%	1/4W
R352	1-247-889-00	CARBON	270K	5%	1/4W

Ref.No.	Part No.	Description			
R353	1-249-433-11	CARBON	22K	5%	1/4W
R354	1-249-417-11	CARBON	1K	5%	1/4W
R355	1-249-441-11	CARBON	100K	5%	1/4W
R356	1-249-417-11	CARBON	1K	5%	1/4W
R357	1-249-405-11	CARBON	100	5%	1/4W
R358	1-215-486-00	CARBON	510K	5%	1/4W
R359	1-249-414-11	CARBON	560	5%	1/4W
R370	1-247-891-00	CARBON	330K	5%	1/4W
R371	1-249-430-11	CARBON	12K	5%	1/4W
R372	1-249-432-11	CARBON	18K	5%	1/4W
R373	1-249-408-11	CARBON	180	5%	1/4W
R380	1-247-891-00	CARBON	330K	5%	1/4W
R381	1-249-430-11	CARBON	12K	5%	1/4W
R382	1-249-432-11	CARBON	18K	5%	1/4W
R383	1-249-408-11	CARBON	180	5%	1/4W
R400	1-249-429-11	CARBON	10K	5%	1/4W
R401	1-249-429-11	CARBON	10K	5%	1/4W
R402	1-215-460-00	CARBON	43K	5%	1/4W
R403	1-249-429-11	CARBON	10K	5%	1/4W
R404	1-249-429-11	CARBON	10K	5%	1/4W
R405	1-249-405-11	CARBON	100	5%	1/4W
R410	1-247-895-00	CARBON	470K	5%	1/4W
R411	1-247-883-00	CARBON	150K	5%	1/4W
R420	1-247-895-00	CARBON	470K	5%	1/4W
R421	1-247-883-00	CARBON	150K	5%	1/4W
R450	1-249-429-11	CARBON	10K	5%	1/4W
R451	1-249-429-11	CARBON	10K	5%	1/4W
R452	1-249-417-11	CARBON	1K	5%	1/4W
R460	1-249-423-11	CARBON	3.3K	5%	1/4W
R461	1-249-429-11	CARBON	10K	5%	1/4W
R462	1-249-420-11	CARBON	1.8K	5%	1/4W
R463	1-249-420-11	CARBON	1.8K	5%	1/4W
R464	1-249-421-00	CARBON	2.2K	5%	1/4W
R465	1-249-441-11	CARBON	100K	5%	1/4W
R466	1-249-417-11	CARBON	1K	5%	1/4W
R467	1-249-434-11	CARBON	27K	5%	1/4W
R468	1-249-421-11	CARBON	2.2K	5%	1/4W
R469	1-249-421-11	CARBON	2.2K	5%	1/4W
R470	1-249-423-11	CARBON	3.3K	5%	1/4W
R471	1-249-429-11	CARBON	10K	5%	1/4W
R472	1-249-420-11	CARBON	1.8K	5%	1/4W
R473	1-249-420-11	CARBON	1.8K	5%	1/4W
R474	1-249-421-00	CARBON	2.2K	5%	1/4W
R475	1-249-441-11	CARBON	100K	5%	1/4W
R476	1-249-417-11	CARBON	1K	5%	1/4W
R477	1-249-434-11	CARBON	27K	5%	1/4W
R478	1-249-421-11	CARBON	2.2K	5%	1/4W
R479	1-249-421-11	CARBON	2.2K	5%	1/4W
R500	1-249-429-11	CARBON	10K	5%	1/4W
R510	1-249-416-11	CARBON	820	5%	1/4W
R511	1-249-407-11	CARBON	150	5%	1/4W
R512	1-249-385-11	CARBON	2.2	5%	1/4W
R513	1-249-385-11	CARBON	2.2	5%	1/4W
R514	1-249-426-11	CARBON	5.6K	5%	1/4W
R520	1-249-416-11	CARBON	820	5%	1/4W
R521	1-249-407-11	CARBON	150	5%	1/4W
R522	1-249-385-11	CARBON	2.2	5%	1/4W

Ref.No.	Part No.	Description
R523	1-249-385-11	CARBON 2.2 5% 1/4W
R524	1-249-426-11	CARBON 5.6K 5% 1/4W
S01	1-571-160-11	SWITCH, SLIDE (RADIO/TAPE)
S03	3-390-661-01	BASE (M) ASSY, P (FWD/REV)
S04	1-570-697-11	SWITCH, LEAF (MUTING)
SW050	1-570-204-21	SWITCH, KEY BOARD (MAN +)
SW051	1-570-204-21	SWITCH, KEY BOARD (MAN −)
SW052	1-570-204-21	SWITCH, KEY BOARD (MONO)
SW053	1-570-204-21	SWITCH, KEY BOARD (LOCAL)
SW054	1-570-204-21	SWITCH, KEY BOARD (SEEK +)
SW055	1-570-204-21	SWITCH, KEY BOARD (SEEK −)
SW056	1-570-204-21	SWITCH, KEY BOARD (M. SCAN/A. MEN)
SW057	1-570-204-21	SWITCH, KEY BOARD (1)
SW058	1-570-204-21	SWITCH, KEY BOARD (2)
SW059	1-570-204-21	SWITCH, KEY BOARD (3)
SW060	1-570-204-21	SWITCH, KEY BOARD (4)
SW061	1-570-204-21	SWITCH, KEY BOARD (5)
SW062	1-570-204-21	SWITCH, KEY BOARD (6)
SW063	1-570-204-21	SWITCH, KEY BOARD (BAND)
SW064	1-571-608-11	SWITCH, PUSH (□□)
SW065	1-571-608-11	SWITCH, PUSH (METAL)
SW066	1-571-608-11	SWITCH, PUSH (AMS)
SW451	1-554-222-00	SWITCH, SLIDE (FAD SELECT)
T150	1-404-724-11	TRANSFORMER, IF
T300	1-426-363-11	TRANSFORMER, HIGH FREQUENCY
T302	1-426-362-11	TRANSFORMER, HIGH FREQUENCY
T304	1-404-795-11	TRANSFORMER, IF
T305	1-404-795-11	TRANSFORMER, IF
T307	1-406-288-11	COIL (OSC)
TC300	1-141-276-00	CAP, TRIMMER
TC301	1-141-276-00	CAP, TRIMMER
TU001	1-463-858-11	FRONT END, FM
VR150	1-238-188-11	RES, ADJ, CARBON 100K
VR151	1-237-784-11	RES, ADJ, CARBON 200K
VR250	1-238-187-11	RES, ADJ, CARBON 50K
VR252	1-237-785-11	RES, ADJ, CARBON 20K
VR300	1-237-784-11	RES, ADJ, CARBON 200K
VR410	1-238-188-11	RES, ADJ, CARBON 100K
VR420	1-238-188-11	RES, ADJ, CARBON 100K
VR450	1-238-173-11	RES, VAR, CARBON 50K/50K (TREBLE)
VR451	1-238-173-11	RES, VAR, CARBON 50K/50K (BASS)
VR452	1-238-174-11	RES, VAR (With S1) 80X2/20KX2/50KX4 (POWER/VOL/BAL/FAD)
XT001	1-567-713-11	VIBRATOR, CRYSTAL

ACCESSORY & PACKING MATERIAL

1-532-360-XX	FUSE (1A)
1-532-422-00	FUSE (6.3A)
3-310-655-01	SUPPORT (ND), FITTING
3-323-208-01	BUSHING, RUBBER
3-323-210-01	ADJUSTOR, STUD BOLT
*3-332-843-01	SCREW (B), STEP
3-336-617-01	BAG, PROTECTION
*3-340-613-01	SCREW (A), STEP
3-340-687-21	KNOB (HANDLE FITTING)
3-345-912-11	CUSHION (LEFT & RIGHT)
3-393-040-11	SHEET, PROTECTION
3-345-909-11	(US).....INDIVIDUAL CARTON
3-345-910-11	(Canadian,AEP)...INDIVIDUAL CARTON
3-764-984-11	(Canadian,AEP)...MANUAL, INSTRUCTION
3-764-984-41	(AEP).....MANUAL, INSTRUCTION
3-769-935-11	(Canadian,AEP)...MANUAL, INSTRUCTION
3-769-935-41	(AEP).....MANUAL, INSTRUCTION
3-764-984-21	(US).....MANUAL, INSTRUCTION
3-769-935-21	(US).....MANUAL, INSTRUCTION
7-621-255-20	SCREW +P 2X4
7-627-553-38	SCREW, PRECISION +P 2X3
7-682-579-04	SCREW +P 5X20
7-682-548-04	SCREW +B 3X8
7-684-025-04	N 5, TYPE 2

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